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SEGA GHOST SQUAD ARCADE GAME MACHINE OWNER'S MANUAL

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ASSY PTV BASE (CTF-0650)
ASSY SUB PTV BASE (CTF-0660)
ASSY SUB PTV BASE (CTF-0670)
ASSY MASK (SPY-0530)
Assy cabinet dx (ctf-1000)
Assy sub cabi dx (ctf-1100)
Sw unit (ctf-1160)
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SEGA®

GHOST SQUAD

Deluxe Version

Owner's Manual

SEGA AMUSEMENTS USA, INC.

MANUAL NO. 4201-6831-01

GAME CODE: CTF

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BEFORE USING THE PRODUCT, BE SURE TO READ THE FOLLOWING:

To maintain the safety:

To ensure the safe usage of the product, be sure to read the following before using the product. The following instructions are intended for the users, operators and the personnel in charge of the operation of the product. After carefully reading and sufficiently understanding the warning displays and cautions, handle the product appropriately. Be sure to keep this manual nearby the product or elsewhere convenient for referring to it when necessary.

Herein, explanations which require special attention are enclosed with dual lines. Depending on the potentially hazardous degrees, the terms of WARNING, CAUTION, etc. are used. Be sure to understand the contents of the displays before reading the text.

Indicates that mishandling the product by disregarding this warning will cause a potentially hazardous situation which can result in death or serious injury.

Indicates that mishandling the product by disregarding this caution will cause a slight hazardous situation which can result in personal injury and or material damage.

For the safe usage of the product, the following pictographs are used:

Indicates "HANDLE WITH CARE." In order to protect the human body an equipment, this display is attached to places where the Owner's Manual and or Service Manual should be referred to.

- **Perform work in accordance with the instructions herein stated.**
  Instructions for work are explained by paying attention to the aspect of accident prevention. Failing to perform work as per the instructions can cause accidents. In the case where only those who have technical expertise should perform the work to avoid hazardous situation, the instructions herein state that the serviceman should perform such work.

- **Be sure to turn off power before working on the machine.**
  To prevent electric shock, be sure to turn off power before starting the work in which the worker touches the interior of the product. If the work is to be performed in the power-on status, the Instruction Manual herein always states to that effect.

- **Be sure to ground the Earth Terminal** (this, however, is not required in the case where a power cord with earth is used).
  This product is equipped with the Earth Terminal. When installing the product, Connect the Earth Terminal to the "accurately grounded indoor earth terminal" by using an earth wire. Unless the product is grounded appropriately, the user can be subject to electric shock. After performing repair, etc. for the Control equipment, ensure that the Earth Wire is firmly connected to the Control equipment.

- **Ensure that the Power Supply used is equipped with an Earth Leakage Breaker.**
  This product does not incorporate the Earth Leakage Breaker. Using a power supply which is not equipped with the Earth Leakage Breaker can cause a fire when earth leakage occurs.

- **Be sure to use fuses which meet the specified rating.** (only for the machines which use fuses).
  Using fuses exceeding the specified rating can cause a fire and electric shock.

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○ **Specification changes (removal of equipment, conversion and addition) not designated by SEGA are not allowed.**
The parts of the product include warning labels for safety, covers for personal protection, etc. It is very hazardous to operate the product by removing parts and or modifying the circuits. Should doors, lids and protective parts be damaged or lost, refrain from operating the product, and contact where the product was purchased from or the office herein stated. SEGA shall not be held responsible for any accidents, compensation for damage to a third party, resulting from the specifications not designated by SEGA.

○ **Ensure that the product meets the requirements of appropriate Electrical Specifications.**
Before installing the product, check for Electrical Specifications. SEGA products have a nameplate on which Electrical Specifications are described. Ensure that the product is compatible with the power supply voltage and frequency requirements of the location. Using any Electrical Specifications different from the designated Specifications can cause a fire and electric shock.

○ **Install and operate the product in places where appropriate lighting is available, allowing warning labels to be clearly read.**
To ensure safety for the customers, labels and printed instructions describing potentially hazardous situation are applied to places where accidents can be caused. Ensure that where the product is operated has sufficient lighting allowing the warnings to be read. If any label is peeled off, apply it again immediately. Please place an order with where the product was purchased from or the office herein stated.

○ **When handling the Monitor, be very careful. (Applies only to the product w/monitor.)**
Some of the monitor (TV) parts are subject to high tension voltage. Even after running off power, some portions are still subject to high tension voltage sometimes. Monitor repair and replacement should be performed only be those technical personnel who have knowledge of electricity and technical expertise.

○ **Be sure to adjust the monitor (projector) properly. (Applies only to the product w/monitor.)**
Do not operate the product leaving on-screen flickering or blurring as it is. Using the product with the monitor not properly adjusted may cause dizziness or a headache to an operator, a player, or the customers.

○ **When transporting or reselling this product, be sure to attach this manual to the product.**
In the case where commercially available monitors and printers are used in this product, only the contents relating to this product are explained herein. Some commercially available equipment has functions and reactions not stated in this manual. Read this manual together with the specific Instruction Manual of such equipment.

- Descriptions herein contained may be subject to improvement changes without notice.
- The contents described herein are fully prepared with due care. However, should any question arise or errors be found, please contact SEGA.

INSPECTIONS IMMEDIATELY AFTER TRANSPORTING THE PRODUCT TO THE LOCATION.

Normally, at the time of shipment, SEGA products are in a status allowing for usage immediately after transporting to the location. Nevertheless, an irregular situation may occur during transportation. Before turning on power, check the following points to ensure that the product has been transported in a satisfactory status.

☐ Are there any dented portions or defects (cuts, etc.) on the external surfaces of the cabinet?
☐ Are Casters and Adjusters, damaged?
☐ Do the power supply voltage and frequency requirements meet with those of the location?
☐ Are all wiring connectors correctly and securely connected? Unless connected in the correct direction, connector connections can not be made accurately. Do not insert connectors forcibly.
☐ Do power cords have cuts and dents?
☐ Do the fuses used meet specified rating? Is the Circuit Protector in an energized status?
☐ Are all accessories available?
☐ Can all Doors and Lids be opened with the Accessory keys? Can Doors and Lids be firmly closed?

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SPECIFICATIONS

Installation Space	: 47.2 inches width X 66.1 inches
Height	: 87.8 inches
Width	: 47.2 inches
Length	: 58.1 inches
Weight	: 557.8 lbs
Power, maximum current	: 590 W 6.31 A (AC 120V 60 Hz AREA)
MONITOR	: 50 Type Projection Display

INTRODUCTION OF THE OWNERS MANUAL

This Owner's Manual is intended to provide detailed descriptions together with all the necessary information covering the general operation of electronic assemblies, electromechanicals, servicing control, spare parts, etc. as regards the product,
SEGA GHOST SQUAD DELUXE TYPE.
This manual is intended for the owners, personnel and managers in charge of operation of the product. Operate the product after carefully reading and sufficiently understanding the instructions. If the product fails to function satisfactorily, non-technical personnel should under no circumstances touch the internal system. Please contact where the product was purchased from.

Use of this product is unlikely to cause physical injuries or damages to property. However, where special attention is required this is indicated by a thick line, the word "IMPORTANT" and its sign in this manual.

Indicates that mishandling the product by disregarding this display can cause the product's intrinsic performance not to be obtained, resulting in malfunctioning.

SEGA AMUSEMENTS USA, INC. / CUSTOMER SERVICE
45133 Industrial Drive, Fremont, California 94538, U.S.A.
Phone : (415) 701-6580
Fax : (415) 701-6594

◆ PRODUCTION DATE ◆

This SEGA product was produced in the year of:

2004

This signifies that this work was disclosed in 2004.

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DEFINITION OF LOCATION MAINTENANCE MAN AND SERVICEMAN

WARNING!

Non-technical personnel who do not have technical knowledge and expertise should refrain from performing such work that this manual requires the location's maintenance man or a serviceman to carry out, or work which is not explained in this manual. Failing to comply with this instruction can cause a severe accident such as electric shock.

Ensure that parts replacement, servicing & inspections, and troubleshooting are performed by the location's maintenance man or the serviceman. It is instructed herein that particularly hazardous work should be performed by the serviceman who has technical expertise and knowledge.

The location's maintenance man and serviceman are herein defined as follows:

"Location's Maintenance Man" :
Those who have experience in the maintenance of amusement equipment and vending machines, etc., and also participate in the servicing and control of the equipment through such routine work as equipment assembly and installation, servicing and inspections, replacement of units and consumables, etc. within the Amusement Facilities and or locations under the management of the Owner and Owner's Operators of the product.

Activities of Location's Maintenance Man :
Assembly & installation, servicing & inspections, and replacement of units & consumables as regards amusement equipment, vending machines, etc.

Serviceman :
Those who participate in the designing, manufacturing, inspections and maintenance service of the equipment at an amusement equipment manufacturer.
Those who have technical expertise equivalent to that of technical high school graduates as regards electricity, electronics and or mechanical engineering, and daily take part in the servicing & control and repair of amusement equipment.

Serviceman's Activities :
Assembly & installation and repair & adjustments of electrical, electronic and mechanical parts of amusement equipment and vending machines.

LISTED
UL®
5K92
AMUSEMENT MACHINE

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Notes:

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1. HANDLING PRECAUTIONS

When installing or inspecting the machine, be very careful of the following points and pay attention to ensure that the player can enjoy the game safely.
Non-compliance with the following points or inappropriate handling running counter to the cautionary matters herein stated can cause personal injury or damage to the machine.

- Before performing work, be sure to turn power off. Performing the work without turning power off can cause an electric shock or short circuit. In the case work should be performed in the status of power on, this manual always states to that effect.
- To avoid electric shock or short circuit, do not plug in or unplug quickly.
- To avoid electric shock, do not plug in or unplug with a wet hand.
- Do not expose Power Cords and Earth Wires on the surface, (floor, passage, etc.). If exposed, the Power Cords and Earth Wires are susceptible to damage. Damaged cords and wires can cause electric shock or short circuit.
- To avoid causing a fire or electric shock, do not put things on or damage Power Cords.
- When or after installing the product, do not unnecessarily pull the power cord. If damaged, the power cord can cause a fire or electric shock.
- In case the power cord is damaged, ask for replacement through where the product was purchased from or the office herein stated. Using the cord as is damaged can cause fire, electric shock or leakage.
- Be sure to perform grounding appropriately. Inappropriate grounding can cause an electric shock.
- Be sure to use fuses meeting specified rating. Using fuses exceeding the specified rating can cause a fire or electric shock.
- Completely make connector connections for IC BD and others. Insufficient insertion can cause an electric shock.
- Specification changes, removal of equipment, conversion and/or addition, not designated by SEGA are not permitted.
  - Failure to observe this may cause a fire or an electric shock. Non-compliance with this instruction can have a bad influence upon physical conditions of the players or the lookers-on, or result in injury during play.
  - SEGA shall not be held responsible for damage, compensation for damage to a third party, caused by specification changes not designated by SEGA.
- Be sure to perform periodic maintenance inspections herein stated.

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STOP
IMPORTANT!

- For the IC board circuit inspections, only the logic tester is allowed. The use of a multiple-purpose tester is not permitted, so be careful in this regard.
- The Projector is employed for this machine. The Projector's screen is susceptible to damage, therefore, be very careful when cleaning the screen. For details, refer to PROJECTOR.
- Some parts are the ones designed and manufactured not specifically for this game machine. The manufacturers may discontinue, or change the specifications of, such general-purpose parts. If this is the case, Sega cannot repair or replace a failed game machine whether or not a warranty period has expired.

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2. PRECAUTIONS CONCERNING INSTALLATION LOCATION

This product is an indoor game machine. Do not install it outside. Even indoors, avoid installing in places mentioned below so as not to cause a fire, electric shock, injury and or malfunctioning.

- Places subject to rain or water leakage, or places subject to high humidity in the proximity of an indoor swimming pool and or shower, etc.
- Places subject to direct sunlight, or places subject to high temperatures in the proximity of heating units, etc.
- Places filled with inflammable gas or vicinity of highly inflammable/volatile chemicals or hazardous matter.
- Dusty places.
- Sloped surfaces.
- Places subject to any type of violent impact.
- Vicinity of anti-disaster facilities such as fire exits and fire extinguishers.
- The operating (ambient) temperature range is from 5˚ to 30˚.

LIMITATIONS OF USAGE REQUIREMENTS

- Be sure to check the Electrical Specifications.
  Ensure that this product is compatible with the location's power supply, voltage and frequency requirements.
  A plate describing Electrical Specifications is attached to the product.
  Non-compliance with the Electrical Specifications can cause a fire and electric shock.
- This product requires the Breaker and Earth Mechanisms as part of the location facilities. Using them in a manner not independent can cause a fire and electric shock.
- Ensure that the indoor wiring for the power supply is rated at 15 A or higher (AC single phase 100~120 V area). Non-compliance with the Electrical Specifications can cause a fire and electric shock.
- Be sure to independently use the power supply equipped with the Earth Leakage Breaker. Using a power supply without the Earth Leakage Breaker can cause an outbreak of fire when earth leakage occurs.
- Putting many loads on one electrical outlet can cause generation of heat and a fire resulting from overload.
- When using an extension cord, ensure that the cord is rated at 15 A or higher (AC 100~120 V area). Using a cord rated lower than the specified rating can cause a fire and electric shock.

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OPERATION AREA

WARNING!

- For the operation of this machine, secure a minimum area of 2.3 m (7.5 ft) (W)×2.8 m (9.2 ft) (D). In order to prevent injury resulting from the falling down accident during game play, be sure to secure the minimum area for operation.
- Be sure to provide sufficient space so as to allow this product's ventilation fan to function efficiently. To avoid machine malfunctioning and a fire, do not place any obstacles near the ventilation opening.
- SEGA shall not be held responsible for damage, compensation for damage to a third party, resulting from the failure to observe this instruction.

STOP
IMPORTANT!

For transporting the machine into the location's building, the minimum necessary dimensions of the opening (of doors, etc.) are 1 m (W) and 1.7 m (H).

Electric current consumption

MAX. 6.31 A (AC 120 V, 60 Hz)
MAX. 3.41 A (AC 220 V, 50 Hz)
MAX. 3.28 A (AC 220 V, 60 Hz)
MAX. 3.22 A (AC 240 V, 50 Hz)
MAX. 6.6 A (AC 110V, 60Hz; TAIWAN)

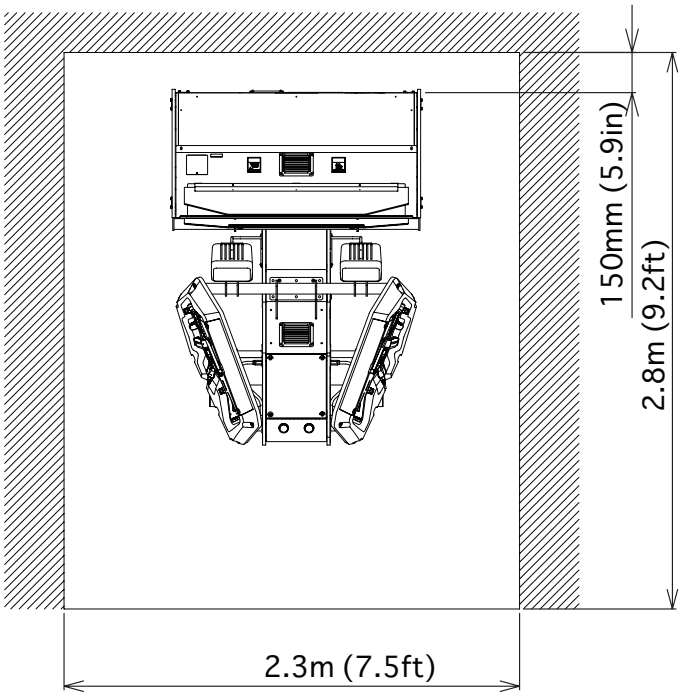

FIG. 2

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3. OPERATION

PRECAUTIONS TO BE HEEDED BEFORE STARTING THE OPERATION

To avoid injury and trouble, be sure to constantly give careful attention to the behavior and manner of the visitors and players.

WARNING!

In order to avoid accidents, check the following before starting the operation:

- To ensure maximum safety for the players and the customers, ensure that where the product is operated has sufficient lighting to allow any warnings to be read. Operation under insufficient lighting can cause bodily contact with each other, hitting accident, and or trouble between customers.
- Be sure to perform appropriate adjustment of the monitor (projector). For operation of this machine, do not leave monitor's flickering or deviation as is. Failure to observe this can have a bad influence upon the players' or the customers' physical conditions.
- It is suggested to ensure a space allowing the players who feel sick while playing the game to take a rest.
- Check if all of the adjusters are in contact with the surface. If they are not, the Cabinet can move and cause an accident.

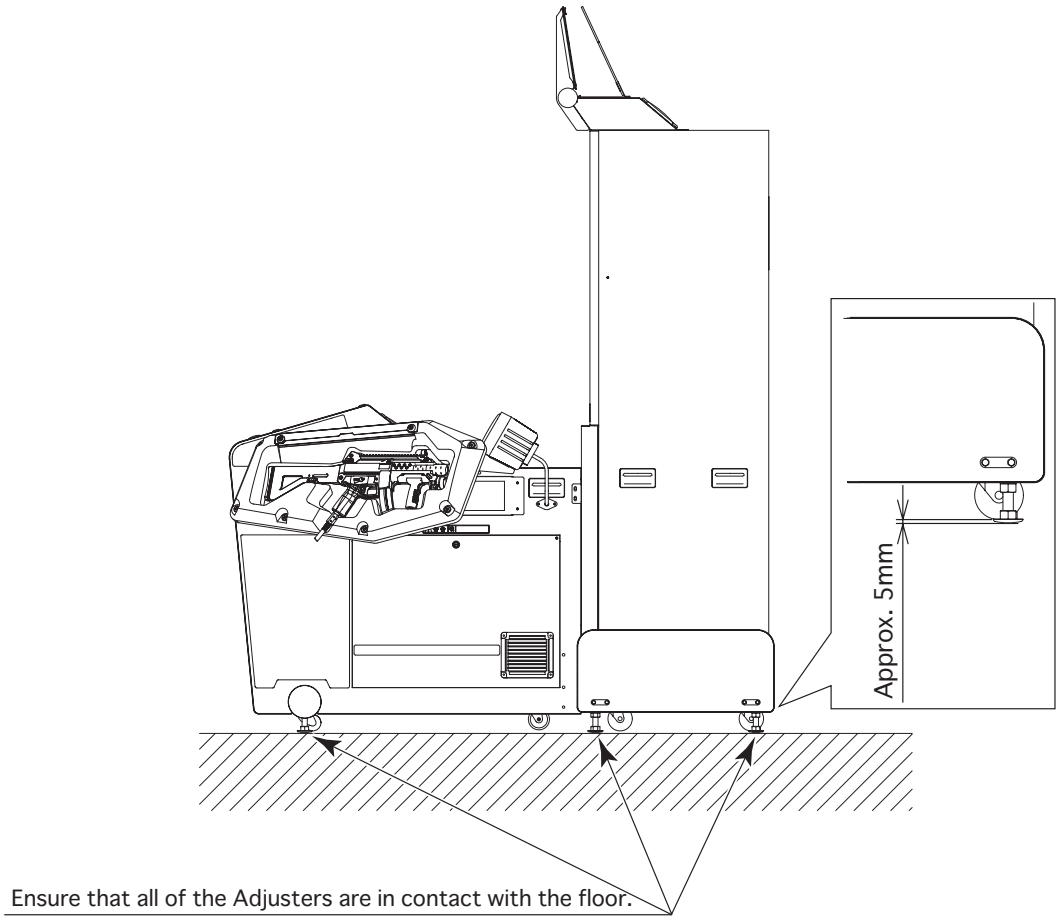

FIG. 3

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WARNING!

- Do not put any heavy item on this product. Placing any heavy item on the product can cause a falling down accident or parts damage.
- Do not climb on the product. Climbing on the product can cause falling down accidents. To check the top portion of the product, use a step.
- To avoid electric shock, check to see if door & cover parts are damaged or omitted.
- To avoid electric shock, short circuit and or parts damage, do not put the following items on or in the periphery of the product.
  Flower vases, flowerpots, cups, water tanks, cosmetics, and receptacles/containers/ vessels containing chemicals and water.

CAUTION!

- To avoid injury, be sure to provide sufficient space by considering the potentially crowded situation at the installation location. Insufficient installation space can cause making bodily contact with each other, hitting accidents, and or trouble between customers.
- During daily cleaning and maintenance, check the surface of the control unit (Gun Controller) for cracks and other damage and ensure that screws are securely fastened. Loose screws, cracks, and other damage could cause harm to players and other customers if left unrepaired.

STOP
IMPORTANT!

Players with bare hands directly hold the controller. For operation, it is recommended that the wet towels (paper towels) be provided.

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PRECAUTIONS TO BE HEEDED DURING OPERATION(PAYING ATTENTION TO CUSTOMERS)

To avoid injury and trouble, be sure to constantly give careful attention to the behavior and manner of the visitors and players.

WARNING!

- To avoid injury and accidents, those who fall under the following categories are not allowed to play the game.
  - Those who need assistance such as the use of an apparatus when walking.
  - Those who have high blood pressure or a heart problem.
  - Those who have experienced muscle convulsion or loss of consciousness when playing video game, etc.
  - Those who have a trouble in the neck and or spinal cord.
  - Intoxicated persons.
  - Pregnant women or those who are in the likelihood of pregnancy.
  - Persons susceptible to motion sickness.
  - Persons whose act runs counter to the product's warning displays.
- A player who has never been adversely affected by light stimulus might experience dizziness or headache depending on his physical condition when playing the game. Especially, small children can be subject to those conditions. Caution guardians of small children to keep watch on their children during play.
- Instruct those who feel sick during play to have a medical examination.
- To avoid injury resulting from falling down and electric shock due to spilled drinks, instruct the player not to place heavy items or drinks on the product.
- To avoid electric shock and short circuit, do not allow customers to put hands and fingers or extraneous matter in the openings of the product or small openings in or around the doors.
- To avoid falling down and injury resulting from falling down, immediately stop the customer's leaning against or climbing on the product, etc.
- To avoid electric shock and short circuit, do not allow the customers to unplug the power plug without a justifiable reason.

CAUTION!

- Immediately stop such violent acts as hitting and kicking the product. Such violent acts can cause parts damage or falling down, resulting in injury due to fragments and falling down.
- Playing close to the cabinet could cause the Gun Controller to strike the cabinet, possibly causing an accident. Be sure to ask your customers to maintain a safe distance during play.
- Wearing large rings and other accessories during play could result in injury to players' fingers. Be sure to ask your customers to remove such accessories before playing.

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STOP
IMPORTANT!

- The Gun Controller for use on 1P side (left side) and 2P side (right side) are different. Ensure that players do not confuse the right and left side guns when starting play.
- Make sure to avoid disturbing customers when moving/removing the machine from its current location.

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4. NAME OF PARTS

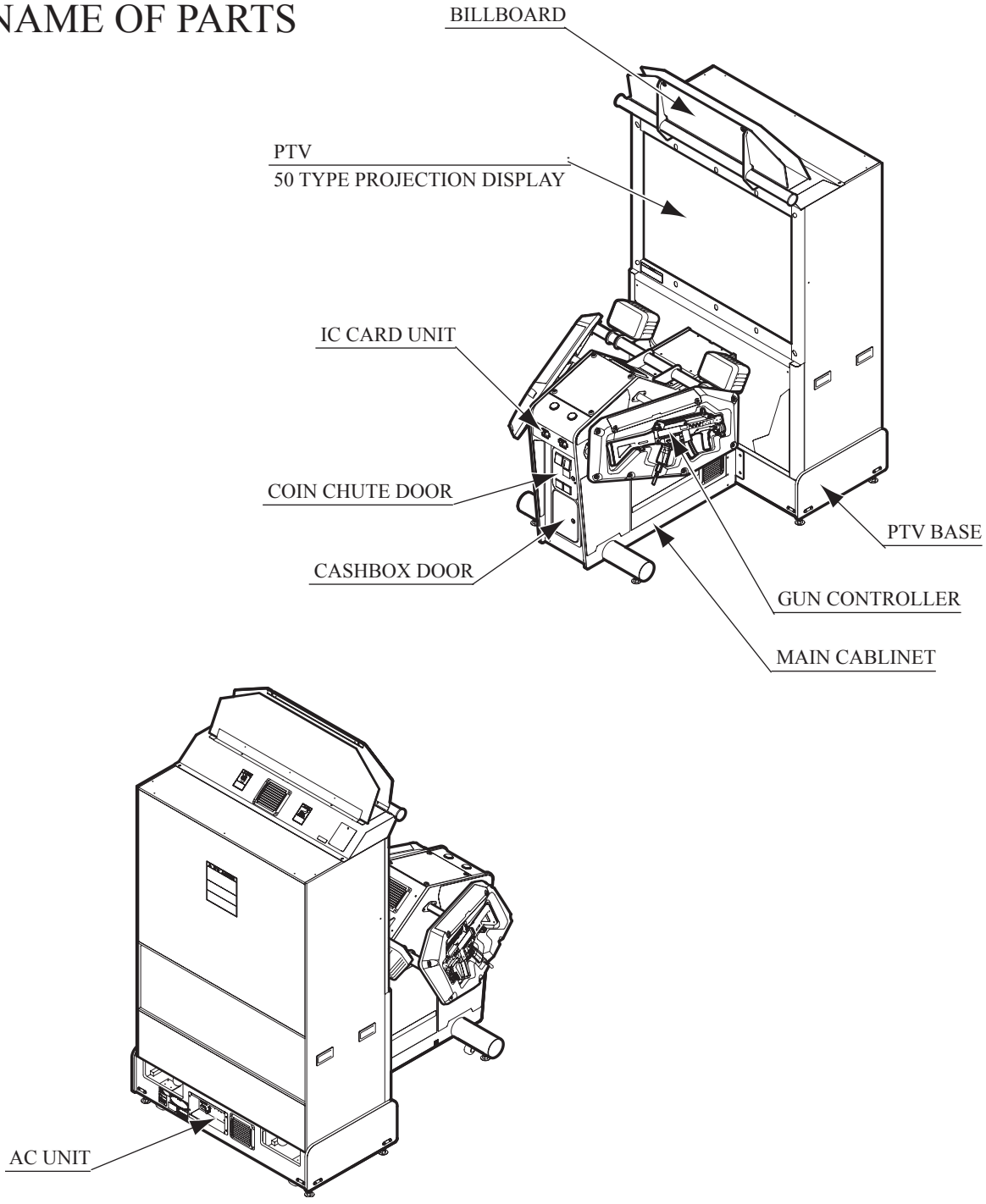

FIG. 4

TABLE 4

	Width × Depth × Height	Weight
PTV	88.19 in × 21.9 in × 65.7 in	220.4 lb
PTV BASE	47.2 in × 24.4 in × 12.2 in	57.3 lb
BILLBOARD	46.06 in × 16.14 in × 15.16 in	39.68 lb
MAIN CABINET	44.9 in × 42.91 in × 39.76 in	216.05 lb
When assembled	47.24 in × 66.14 in × 67.8 in	557.77 lb

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5. ACCESSORIES

When transporting the machine, make sure that the following parts are supplied.

TABLE 5 a ACCESSORIES

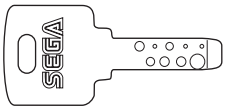
DESCRIPTION	OWNERS MANUAL
Part No.(Qty.)	4201-6831-01
Note	

Figures

NOTE: Parts not labeled with part numbers are as yet unregistered or cannot be registered. Be sure to handle all parts with care, as some parts are not available for purchase separately.

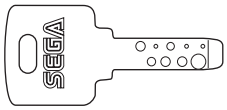
KEY MASTER
220-5576 (2)

For opening/closing the doors



KEY
(2)

For the CASHBOX DOOR

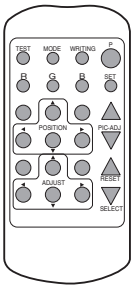


The Keys are inside the Coin Chute Door at the time of shipment from the factory.

TOSHIBA
200-5536 (1)

Remote Controller used for adjustment of the projector.

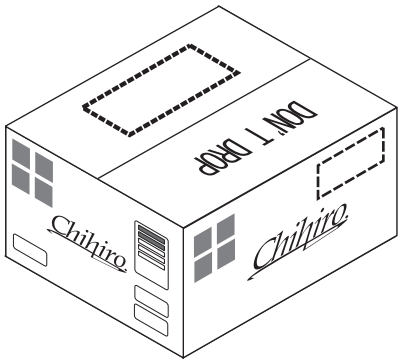
See Section 12.



The Remote Controller is attached to the Projector at the time of shipment.

CARTON BOX
601-11219-01 (1)

Used for transporting the Game Board.
See FIG. 5 a.



L-WRENCH
540-0043-91 (1)

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HOW TO USE THE CHIHIRO BOARD CARTON BOX

STOP
IMPORTANT!

Replacement or repair of the Game Board (Chihiro) for this product should be undertaken at the appropriate repair center. Be sure to follow the specifications below when requesting repairs/sending the board to the repair center. Not following the specifications may result in the board not being accepted or in extra charges being made.

- Put the game board in the carton box as is. Do not carry out any disassembly or part removal other than that specified.
- Follow the procedure and instructions regarding direction below when placing the Game Board in the carton box.
- When packing the game board with the Media Board attached, do not remove the Key Chip.
- When packing the game board with the Media Board detached, be sure to include the AVIP Cable.
- When packing, attach the accessory stickers in the specified places on the Game Board and carton box.

INSTRUCTIONS

- Wrap the Chihiro Board in a plastic bag.
- Place it on top of the bottom surface cushioning material. Turn the Filter Board to face the side with the three honeycomb buffers. Placing it in the opposite direction may cause damage to the Filter Board.
- Insert corrugated cardboard into the space between the lateral honeycomb buffers of the bottom surface cushioning material and stow the AVIP cable inside.
- Place the Chihiro Board wrapped in the bottom surface cushioning material into the carton box. Use the handles on the bottom surface cushioning material.
- Place the upper surface cushioning material on top of the Chihiro Board. Be sure to align it in the right direction, as it will not fit otherwise.
- Close the top of the carton box and seal it tightly with adhesive tape.

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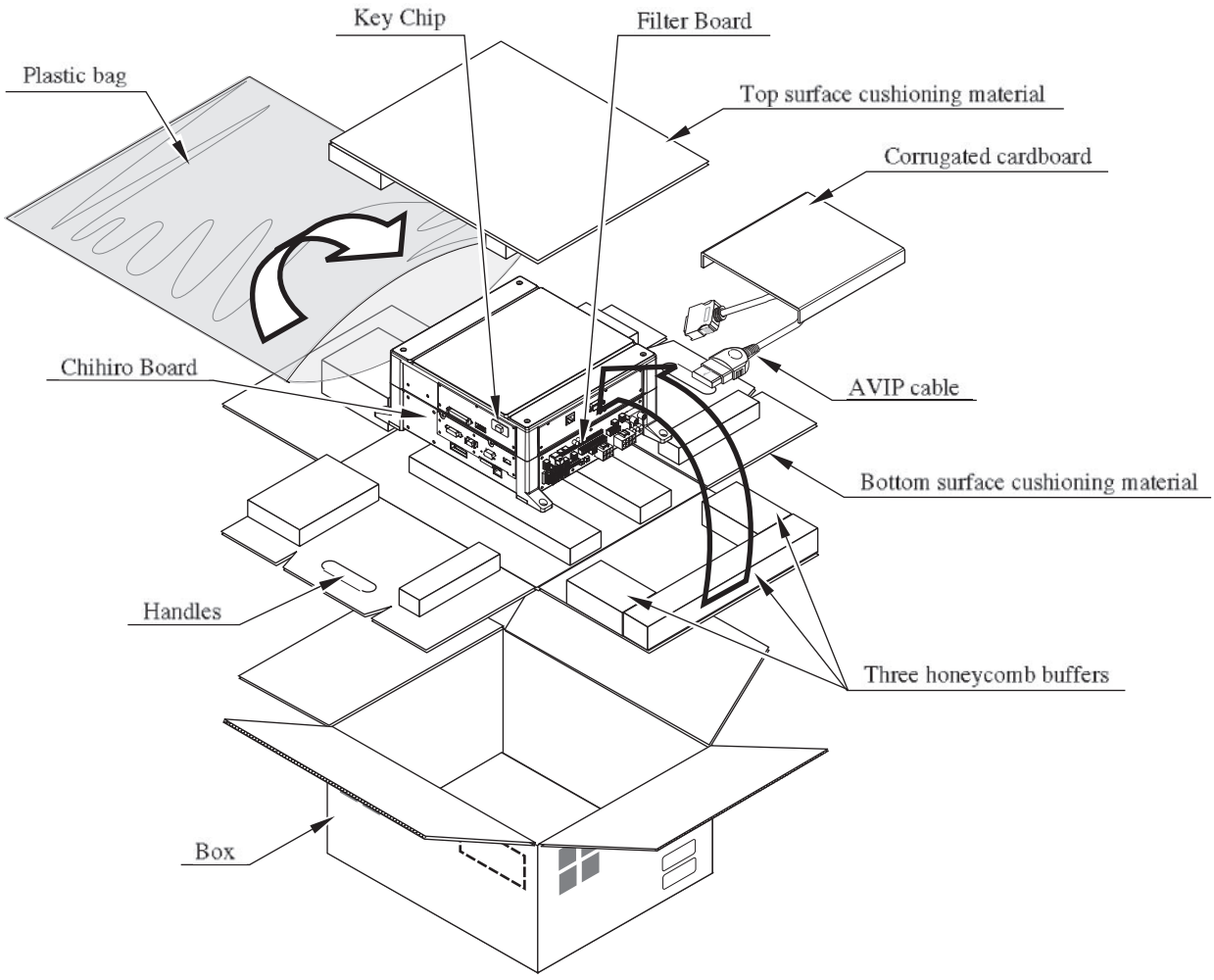

FIG. 5 a

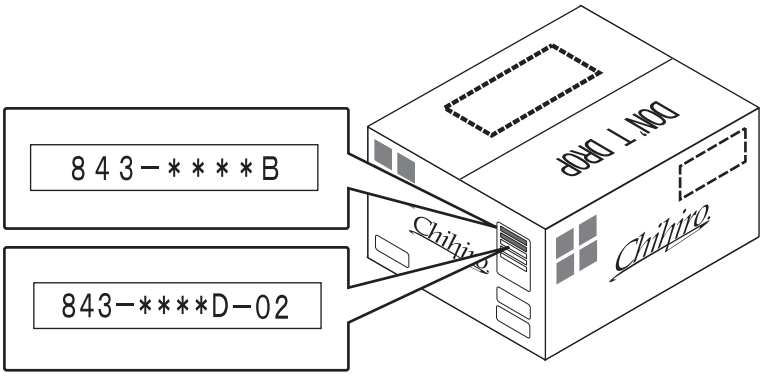

FIG. 5 b

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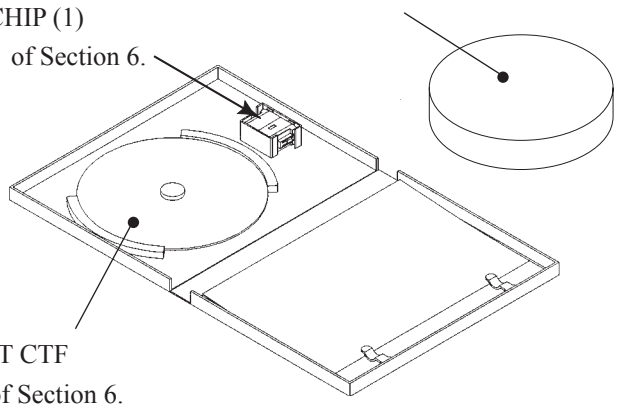
The following Table 5b lists the parts that had been separately packed when the product was shipped from the factory but are necessary when you use the product. These parts will be mounted on the product when installing and assembling it.

TABLE 5 b

GD SOFT KIT CTF



NOTE: When you order the GD-ROM disc only, specify the part number 610-0652-0012 (GD SOFT CTF).

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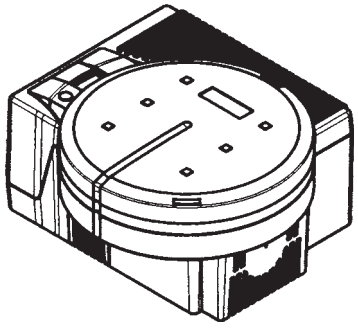
The following Table 5c lists the parts that are separately marketed but are necessary when booting this product's software. When having unpacked the shipping crate, make sure that all the parts in this Table 5c are in the crate. If not so, contact where you have obtained the product.

TABLE 5 c (XKT-0833 : GD-ROM DRIVE KIT)

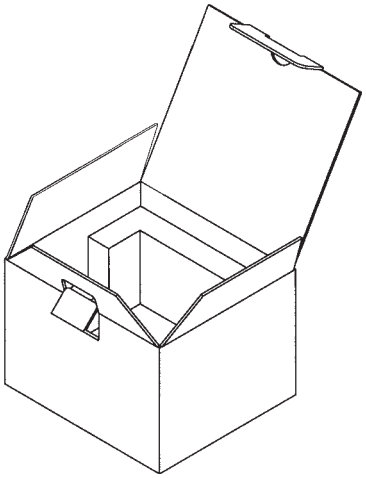
GD-ROM DRIVE
610-0617
610-0617-01 (1)

Device that loads the software in a GD-ROM disc.
See 6 of Section 6.



GD-ROM DRIVE CARTON BOX
(1)

Used for transporting the GD-ROM DRIVE.
See FIG. 5 d.



This carton box is a standard accessory of the GD-ROM drive. If you want to obtain the carton box itself separately, specify the part number 601-11031.

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HOW TO USE THE CARTON BOX (GD-ROM DRIVE)

STOP
IMPORTANT!

When you want to order for replacing or repairing service of the GD-ROM drive that is used by the product, pack it in a carton box as instructed below, and then deliver the carton box to a service agent. If you do not observe the instruction, your order may not be accepted or may be charged additionally. If you handle the GD-ROM drive differently from the following instructions, its components may be damaged.

- Contain the GD-ROM drive in a dedicated carton box. Do not disassemble it or remove any part from it unless otherwise instructed.
- Before containing the GD-ROM drive in a dedicated carton box, attach the GD-ROM drive lid (DISC LID) onto the drive and fix the lid with a screw.
- Before containing the GD-ROM drive in a dedicated carton box, remove the GD-ROM disc from the drive. Do not attempt to move the GD-ROM drive with a GD-ROM disc inside.
- Before containing the GD-ROM drive in a dedicated carton box, remove the GD-ROM drive bracket. Carefully keep the GD-ROM drive bracket and the 4 set screws, because they will be reused.
- When inserting the GD-ROM drive into a dedicated carton box, be careful about an inserting direction as illustrated below.
- The packing materials in a carton box are used as a cushion. Use them always when inserting the GD-ROM drive into a dedicated carton box. Do not bend them.

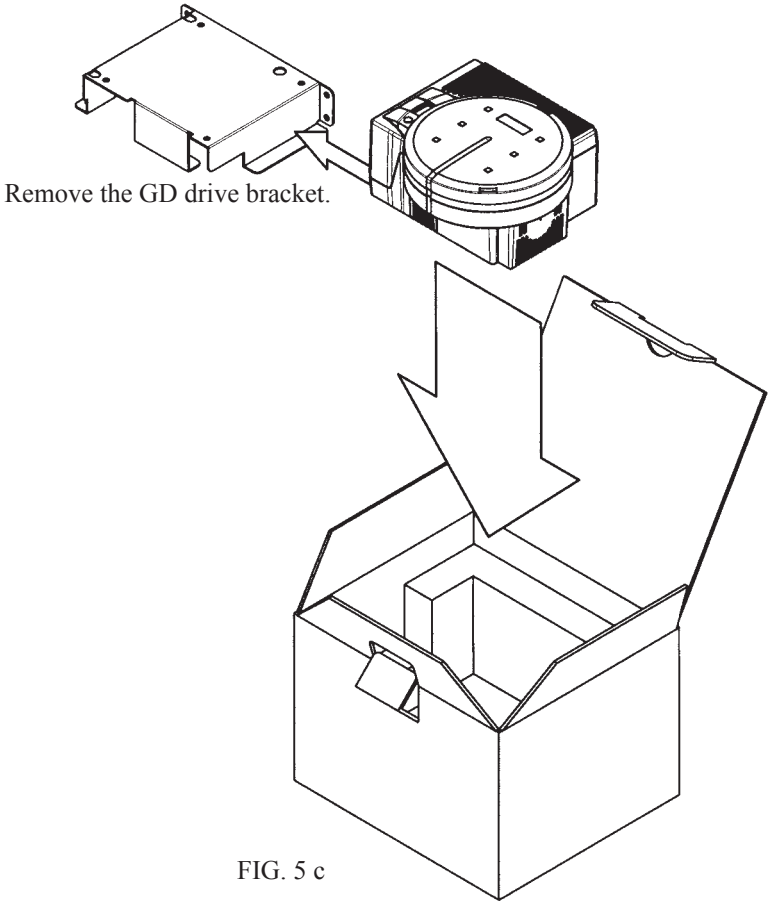

FIG. 5 c

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6. ASSEMBLY AND INSTALLATION

WARNING!

- Perform assembly work by following the procedure herein stated. Failing to comply with the instructions can cause electric shock hazard.
- Perform assembling as per this manual. Since this is a complex machine, erroneous assembling can cause an electric shock, machine damage and or not functioning as per specified performance.
- When assembling, be sure to use plural persons. Depending on the assembly work, there are some cases in which working by one person alone can cause personal injury or parts damage.
- Ensure that connectors are accurately connected. Incomplete connections can cause electric shock hazard.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a fire risk.
- Do not carelessly push the PTV. Pushing the PTV carelessly can cause the PTV to fall down.
- This work should be performed by the site maintenance individual or other skilled professional. Performing work by non-technical personnel can cause a severe accident such as electric shock. Failing to comply with this instruction can cause a severe accident such as electric shock to the player during operation.
- Provide sufficient space so that assembling can be performed. Performing work in places with narrow space or low ceiling may cause an accident and assembly work to be difficult.
- To perform work safely and avoid serious accident such as the cabinet's falling down, do not perform work in places where step-like grade differences, a ditch, or slope exist.
- Do not use this product with connectors other than those that were connected and used with the Game Board at the time of shipping. Do not carelessly connect wires to connectors that were not used at the time of shipping, as this may cause overheating, smoke or fire damage.

CAUTION!

- When handling plastic parts, use care. Do not give a shock or apply excessive load to the fluorescent lamps and plastic parts. Failure to observe this can cause parts damage, resulting in injury due to fragments, cracks and broken pieces.
- To perform work safely and securely, be sure to prepare a step which is in a secure and stable condition. Performing work without using the step can cause violent falling down accidents.
- Make sure that the GD cable connector is inserted parallel to the plug. Improper insertion may cause damage to the connector and present a fire risk.

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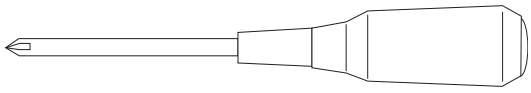
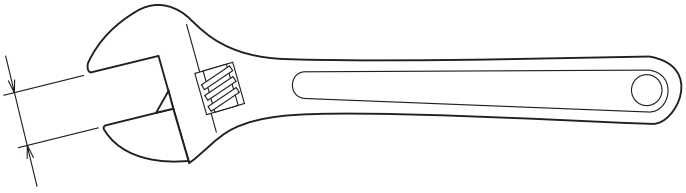
When carrying out the assembling and installation, follow the following 9-item sequence.

1. ASSEMBLING THE BILLBOARD
2. ASSEMBLING THE PTV
3. ASSEMBLING THE CABINET
4. SECURING IN PLACE(ADJUSTER TUNING)
5. ATTACHING THE FLUORESCENT LIGHTS AND LAMPS
6. INSTALLING THE GD-ROM DRIVE(SETTING THE GD-ROM DISC)
7. POWER SUPPLY AND EARTH CONNECTION
8. TURNING THE POWER ON
9. ASSEMBLY CHECK

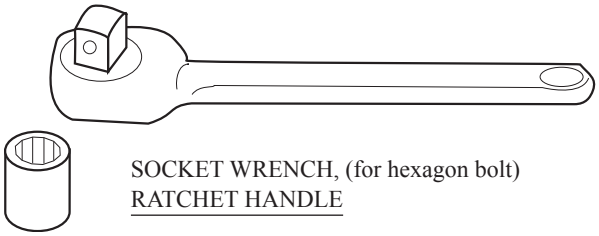
The master key (accessories) in addition to the tools such as a Phillips type screwdriver, wrench, socket wrench and Ratchet Handle are required for the assembly work.



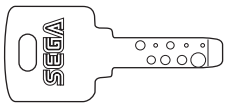
Phillips type screwdriver
(for screw)



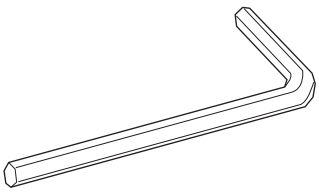
WRENCH (for hexagon bolt)



SOCKET WRENCH, (for hexagon bolt)
RATCHET HANDLE



KEY MASTER



L-WRENCH (3mm L-shaped hex wrench, included)

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1 ASSEMBLING THE BILLBOARD

- Undo the 2 truss screws, and remove the pop bracket.

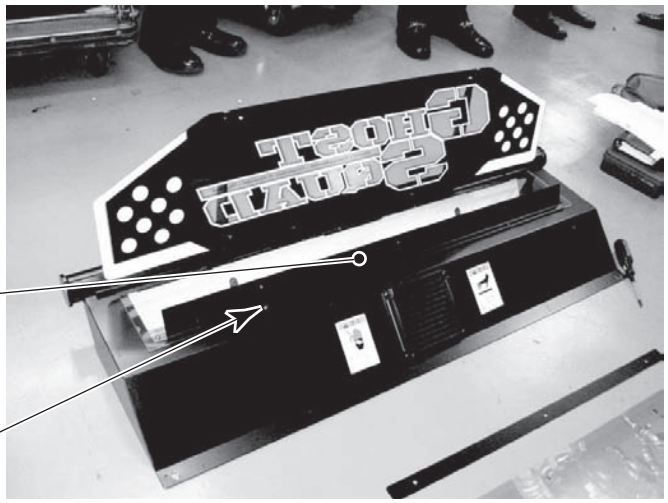

PHOTO 6. 1 a

- Undo the 3 truss screws, and remove the pop holder.

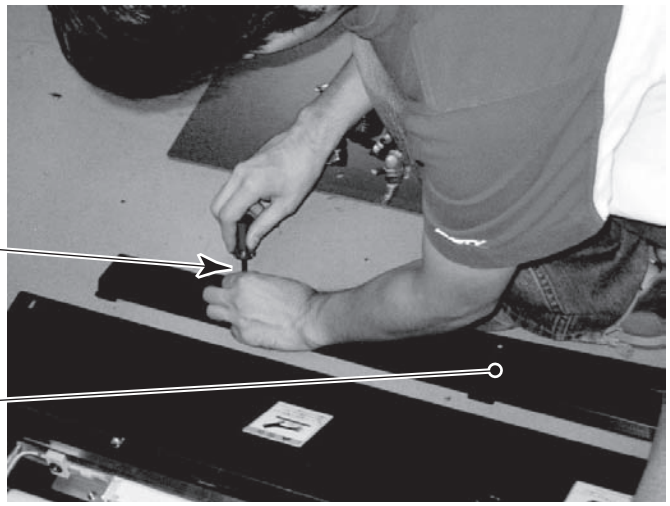

PHOTO 6. 1 b

- Attach the billboard pop by fitting it between the pop bracket and pop holder, and fixing it in place with the 3 truss screws.

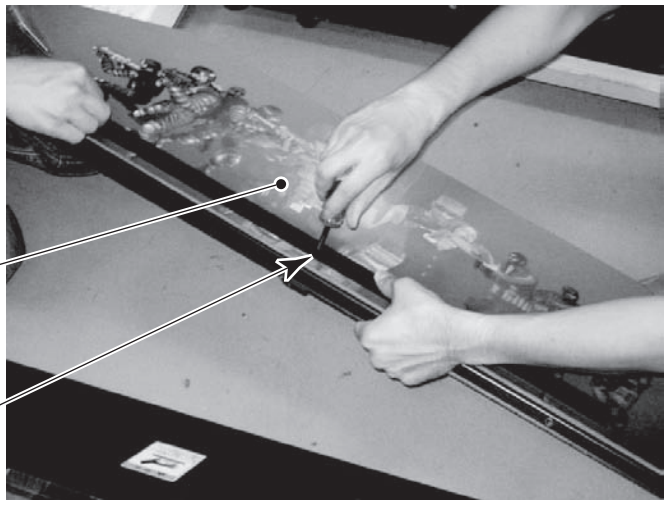

PHOTO 6. 1 c

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- Attach the assembled billboard pop using the 2 truss screws.

PHOTO 6. 1 d

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2 ASSEMBLING THE PTV

- By using 2 Flat Head screws, secure the 2 Mask Bracket Uppers to the PTV ceiling.
- Secure the Mask Bracket Lower to the front of PTV with 4 screws.

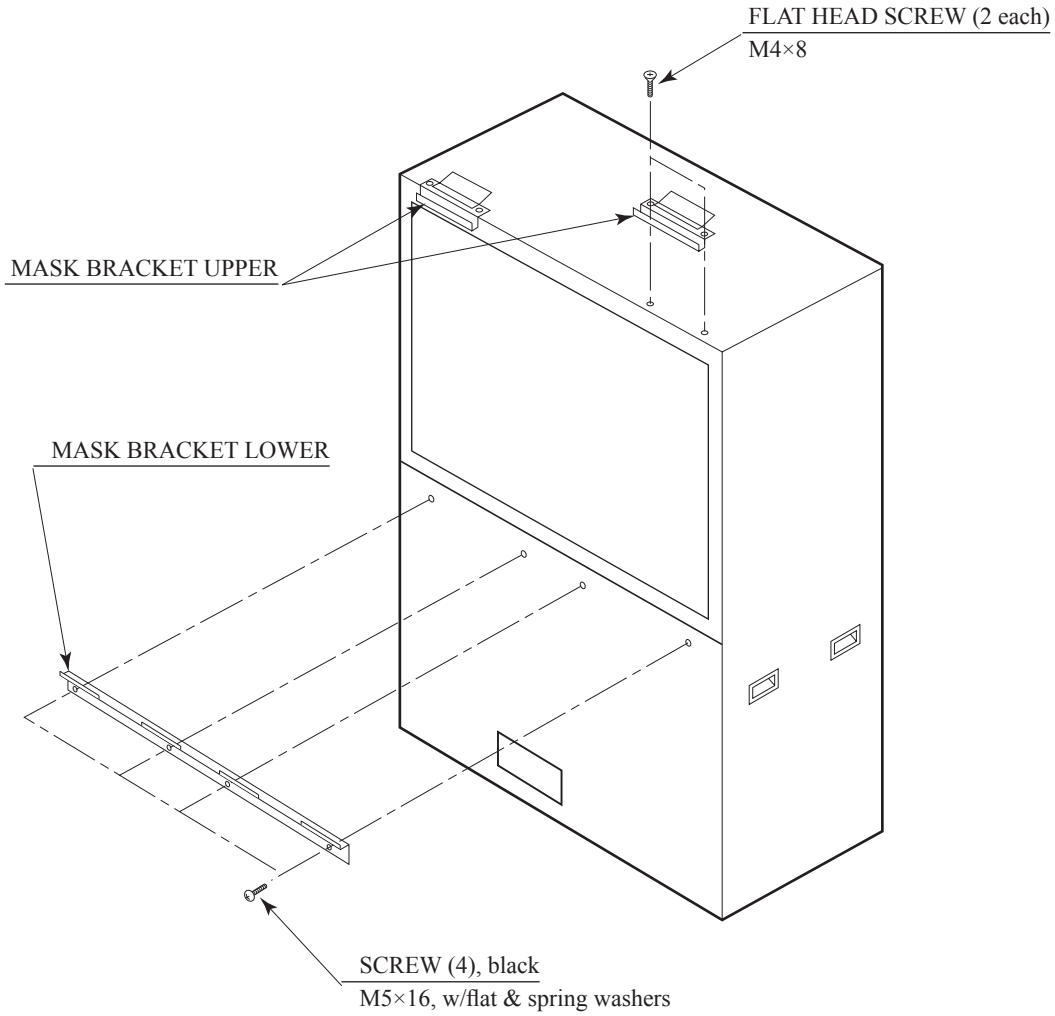

FIG. 6. 2 a

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- Install Mask to the PTV front. Install the Mask in a manner hooking up to both 2 Mask Bracket Uppers and the Mask Bracket Lower. Simultaneously insert the projections of the Mask into the square holes in the PTV screen left and right.

- Secure the Mask by fastening a screw for each from both sides of PTV.

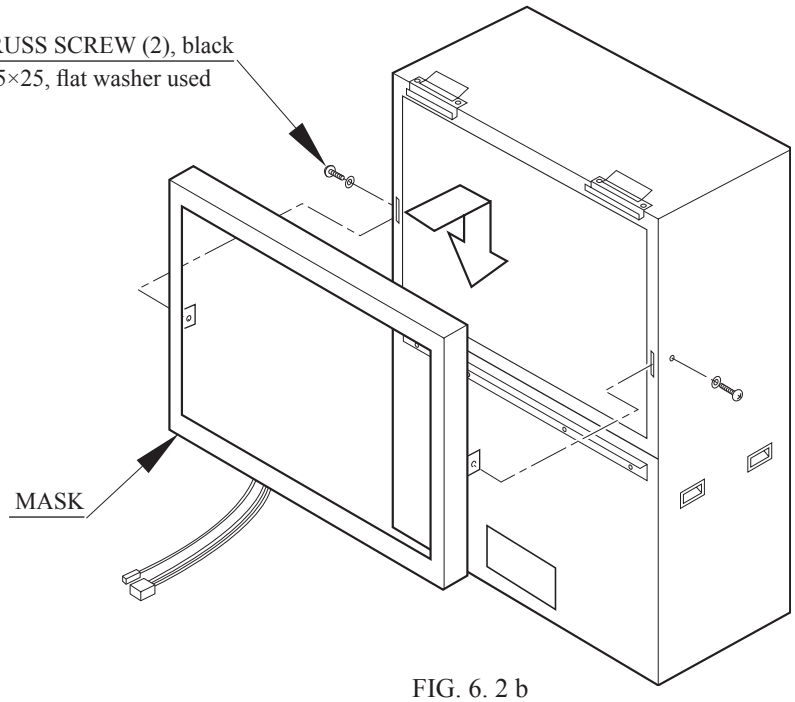

FIG. 6. 2 b

- Affix the side bracket L and side bracket R to the PTV front face using 2 screws each. Be careful of the orientation of the parts.

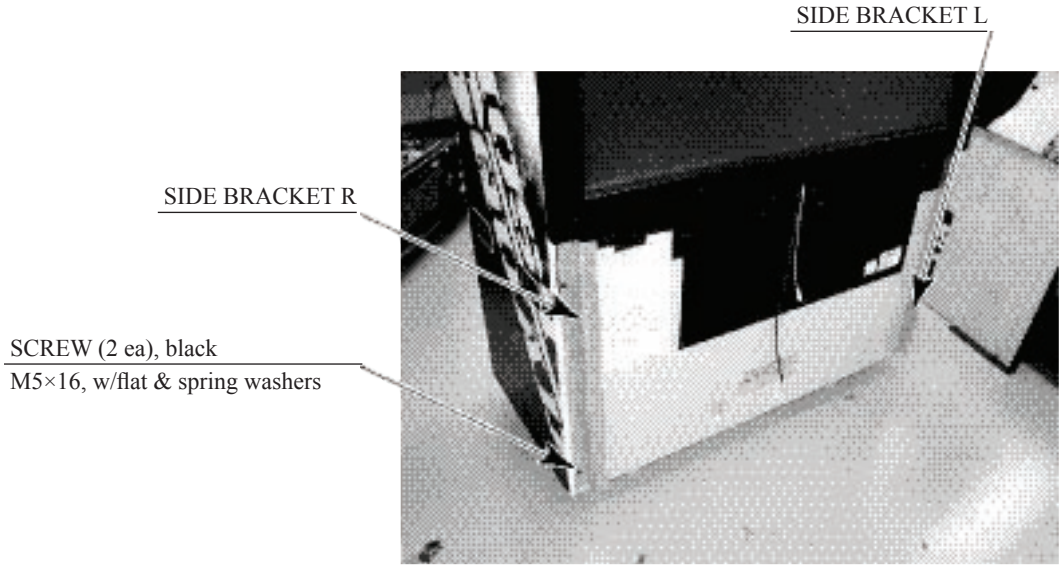

PHOTO 6. 2 a

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3 ASSEMBLING THE CABINET

- Move the PTV to the back of the PTV base.

- Put the PTV on the PTV base. To do this, you will need at least 4 people to lift the PTV, and another person to hold the PTV base to stop it from moving. Lower the PTV until it touches the supports. Take care not to damage any wiring during this step.

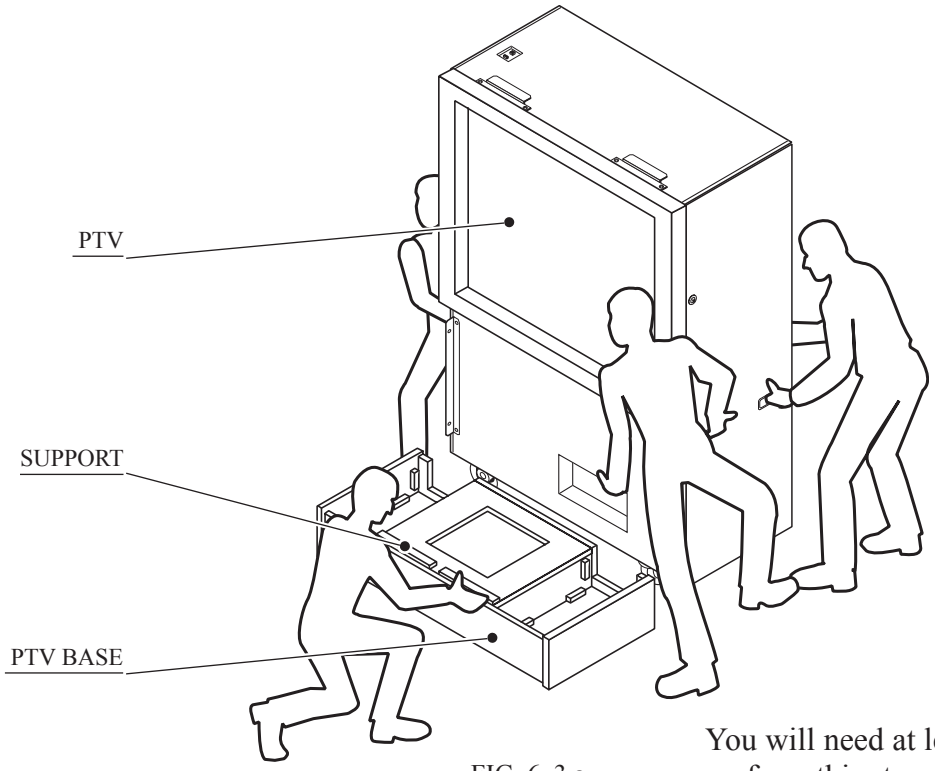

FIG. 6. 3 a

You will need at least 5 people to perform this step.

- Attach the front panel using 4 truss screws. Take care that you do not damage any wiring during this step.

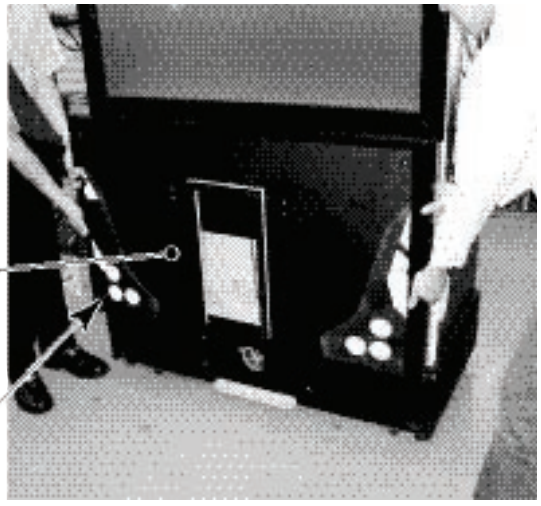

PHOTO 6. 3 a

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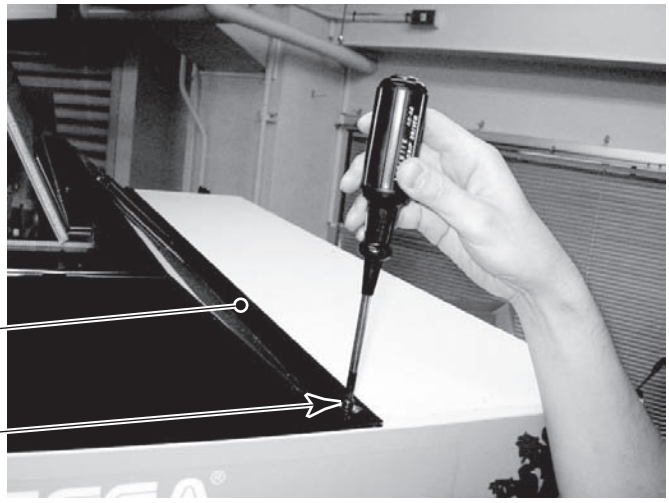
- Have 2 people lift the billboard and place it on the PTV. Lower the billboard so that the two mask bracket uppers that were attached in step 2 fit into the 2 rectangular holes in the billboard base plate, and push the billboard towards the PTV screen. The base plate of the billboard is then fixed into place by fitting into the mask brackets.

You will need 2 people to perform this step.

PHOTO 6. 3 b

- You will need a footstool to complete the following step. Attach the billboard to the PTV using 2 screws.



You will need a footstool to perform this step.

PHOTO 6. 3 c

- Undo the single truss screw and remove the connector lid.

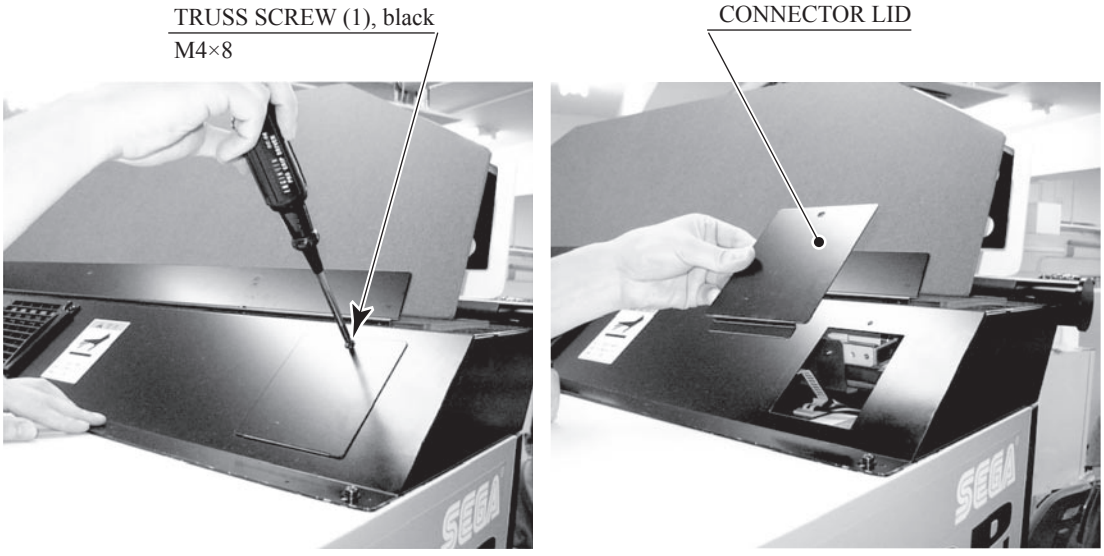


PHOTO 6. 3 d

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- Connect the internal billboard connector to the connector in the PTV ceiling.

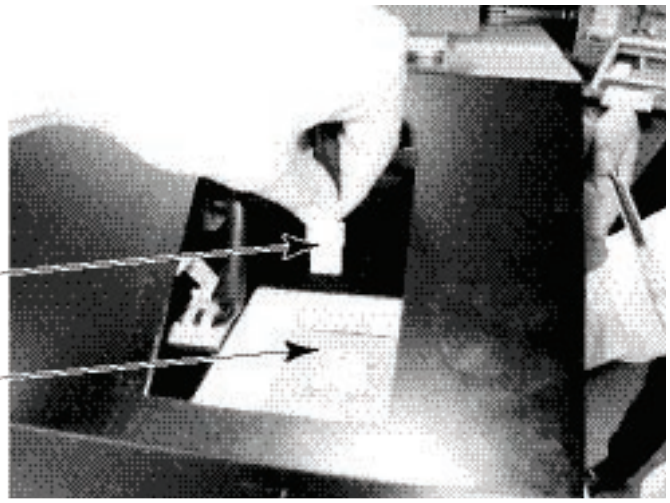

PHOTO 6. 3 e

- Attach the connector lid using the single truss screw.

- Bring the main cabinet next to the PTV.
- Connect the wiring between the main cabinet and the PTV. You will need to connect a total of 5 connectors.

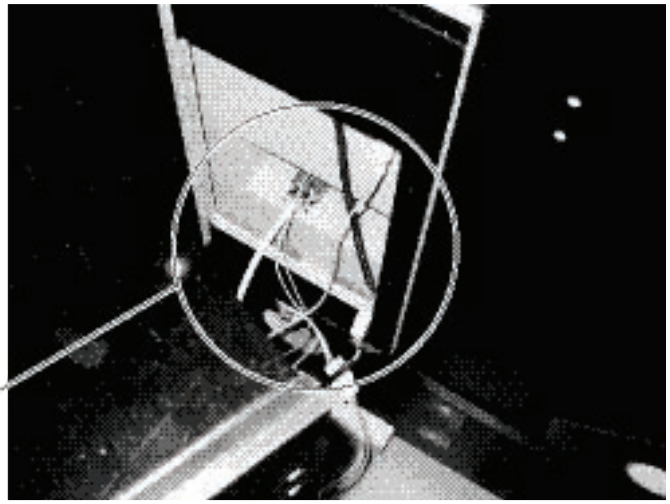

PHOTO 6. 3 f

- Place the main cabinet on the supports in the PTV base. Make sure that the wires do not get pinched while you do this.

Be careful not to pinch the wiring.

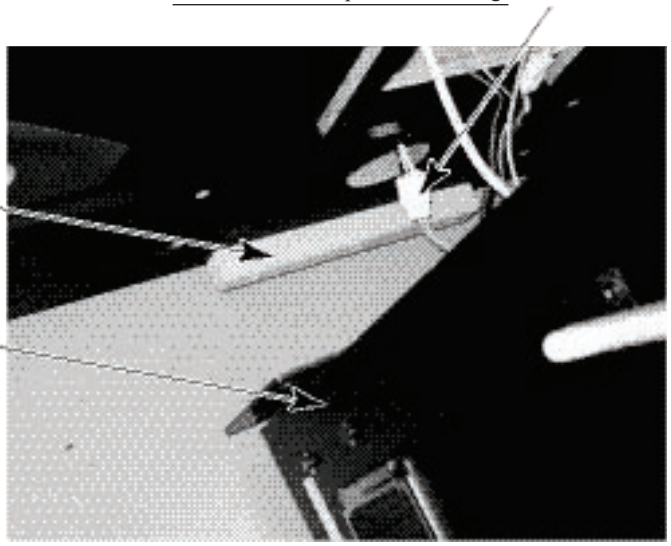

PHOTO 6. 3 g

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- Tighten the 2 hexagon bolts on each of the left and right brackets of the main cabinet to affix the cabinet.

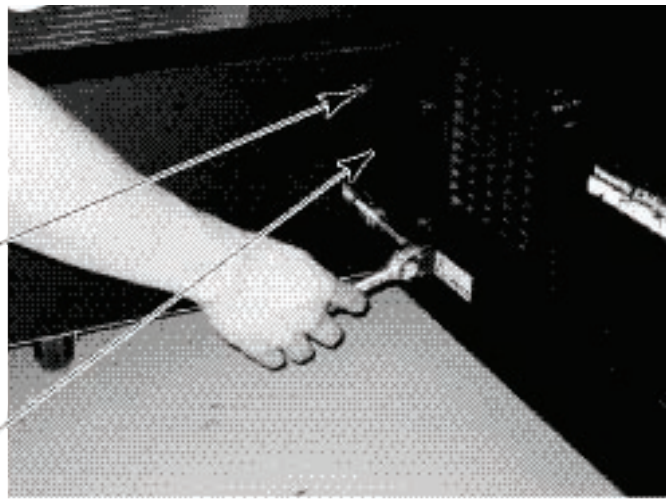

PHOTO 6. 3 h

- Attach the joint bracket uppers to the left and right sides of the joint between the main cabinet and the PTV using 4 truss screws on each side to secure the joint. Arrange these so that the vertical holes correspond to the main cabinet and the horizontal holes correspond to the PTV.
  If there is a gap between the main cabinet and the PTV, adjust the main cabinet or the adjuster on the PTV base to close the gap before tightening the screws.

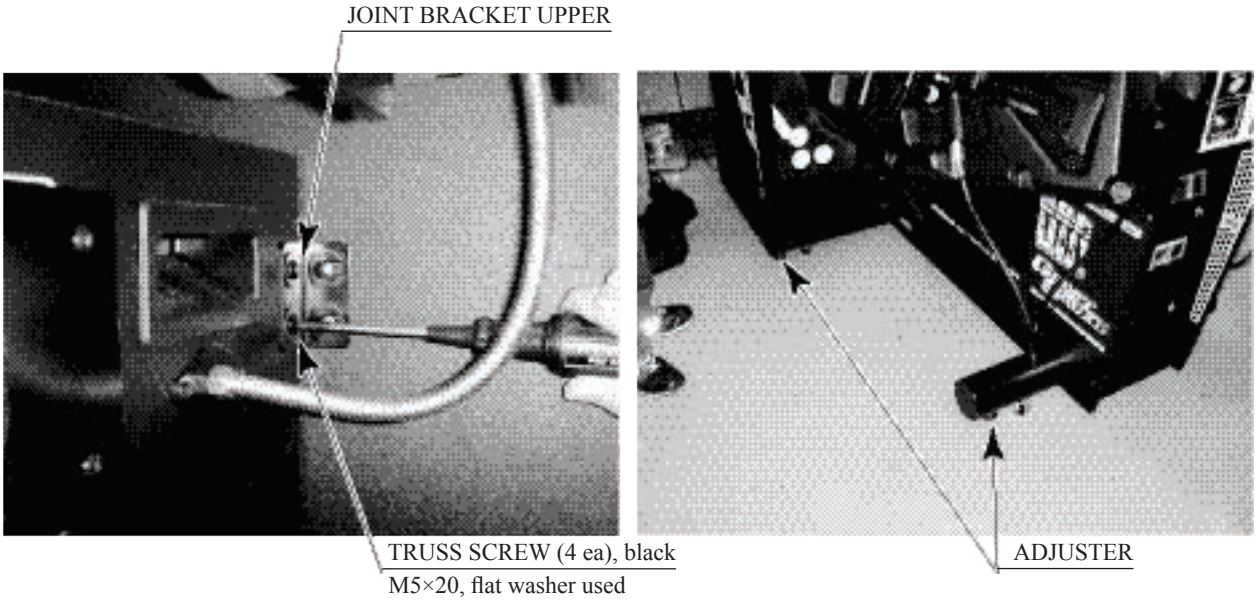

PHOTO 6. 3 i

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4 SECURING IN PLACE (ADJUSTER TUNING)

WARNING!

> Make sure that all of the adjusters are in contact with the floor. If they are not, the cabinet can move and cause an accident.

This product has 8 casters (4 for PTV Base, 4 for MAIN CABINET) and 6 Adjusters (4 for PTV Base, 2 for MAIN CABINET). (FIG. 6. 4 a) When the installation position is determined, cause the adjusters to come into contact with the floor directly, make adjustments in a manner so that the casters will be raised approximately 5 mm. from the floor and make sure that the machine position is level.

- Transport the product to the installation position.
- Have all of the adjusters make contact with the floor. Adjust the adjuster's height by using a wrench so that the machine position is kept level.
  When contacting the adjusters of the right and left fences onto the floor, manually turn them.
- After making adjustment, fasten the adjuster nut upward and secure the height of adjuster.

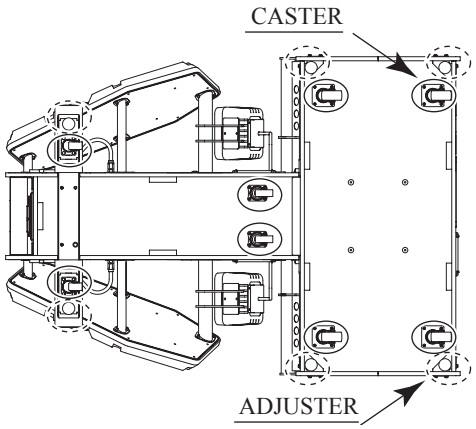

FIG. 6. 4 a BOTTOM VIEW

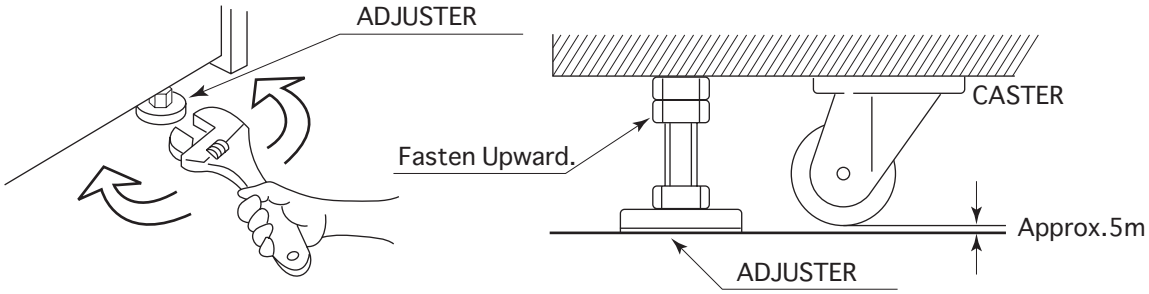

FIG. 6. 4 b ADJUSTER

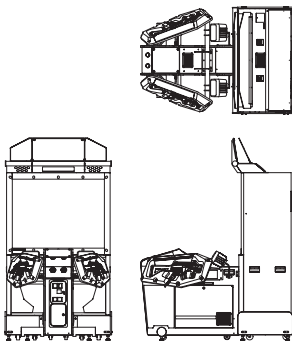

FIG. 6. 4 c
Refer to this Fig. (Scale:1/100) for the layout of the place of installation.

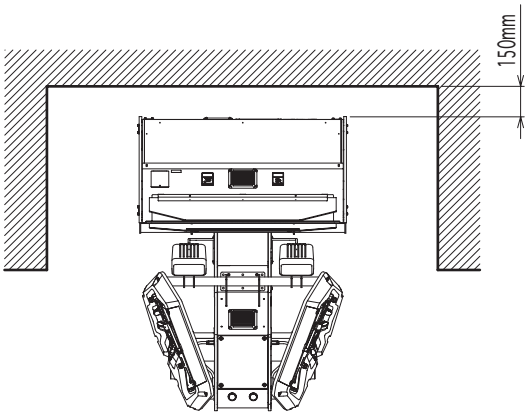

FIG. 6. 4 d
Provide ventilation space for the ventilation opening.

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5 ATTACHING THE FLUORESCENT LIGHTS AND LAMPS

Fluorescent Light

- Undo the 4 screws using the supplied L-wrench, and remove the instruction panel.

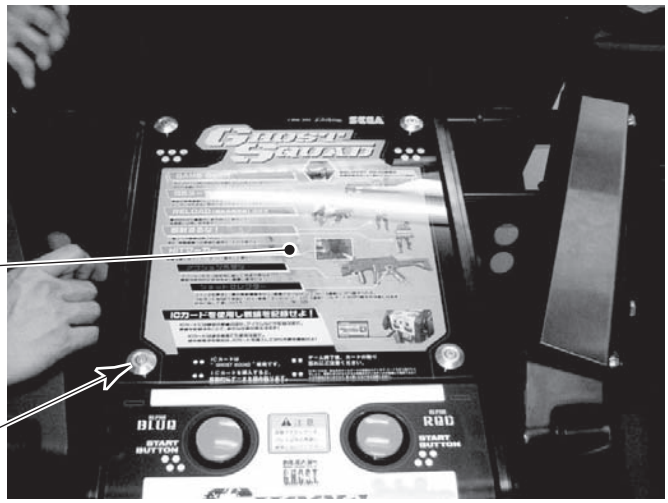

PHOTO 6. 5 a

- Attach the globe-shaped fluorescent light.

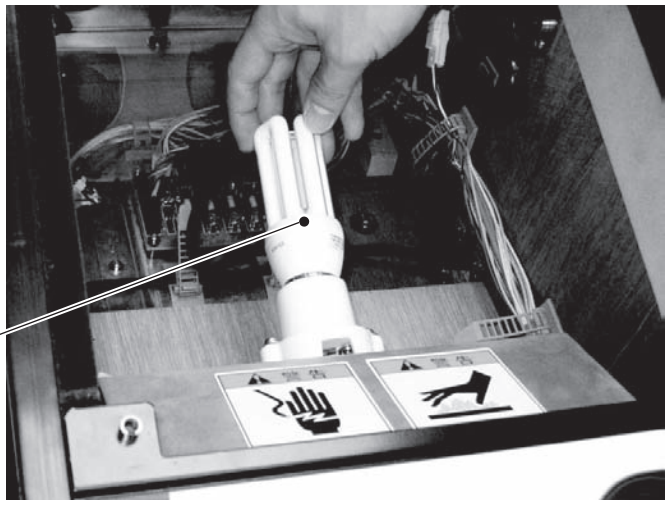

PHOTO 6. 5 b

- Reattach the instruction panel in its original position using the 4 screws.

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Halogen Lamp

- Undo the 4 truss screws, and remove the lamp lid.

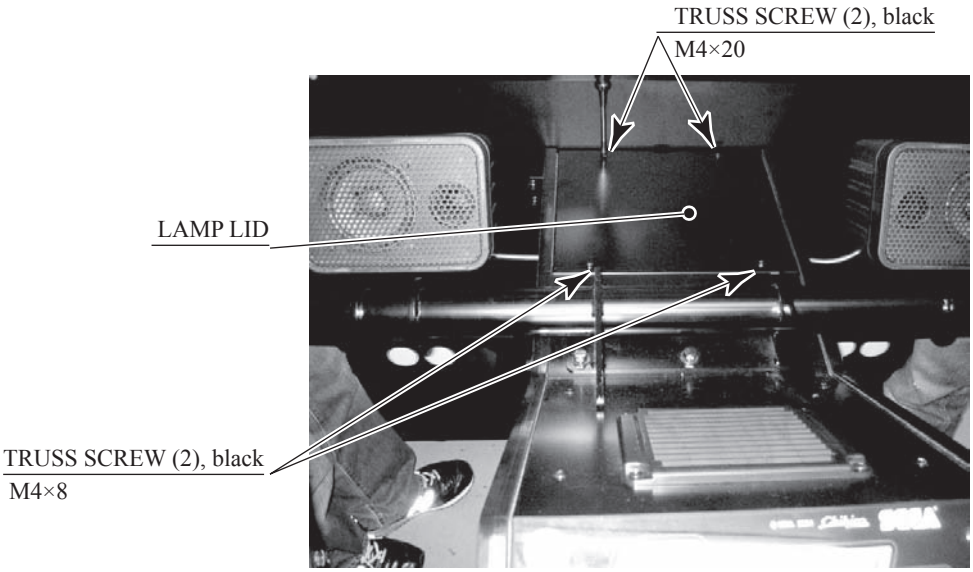

PHOTO 6. 5 c

- Attach the halogen lamp.

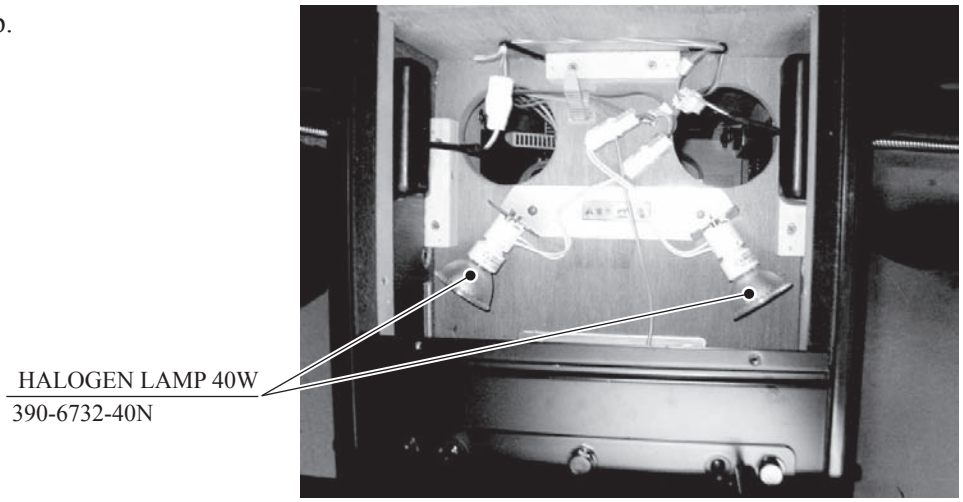

PHOTO 6. 5 d

- Reattach the lamp lid in its original position using the 4 screws.

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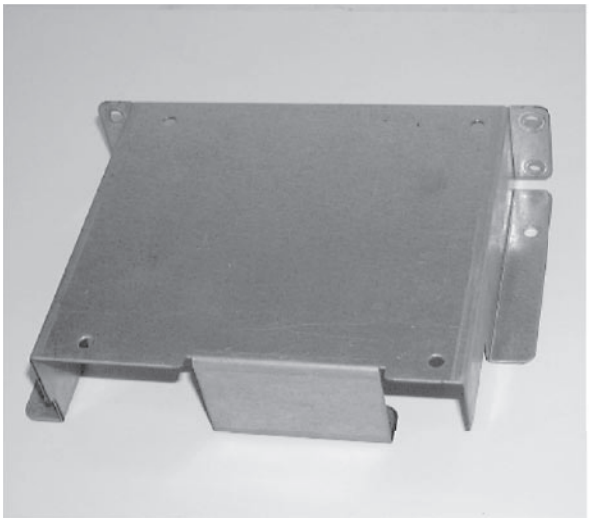
6 INSTALLING THE GD-ROM DRIVE (SETTING THE GD-ROM DISC)

STOP
IMPORTANT!

- Carefully handle the GD-ROM drive so as not to contaminate the disc and the read-out lens with stains and dust particles.
- Do not continue to use the scratched GD-ROM disc. The scratched GD-ROM disc may cause the system to malfunction.
- Set the GD-ROM disc onto the GD-ROM drive with its labeled side facing upward.
- The key chip is a precision device. Handle it carefully and avoid exposure to heat, shock and static electricity, as these may cause damage to the device.
- The key chip is contained in the GD-ROM disc case. Always use them as a set.

This section explains how to remove the ASSY MAIN BD from the main cabinet, set the GD-ROM disc onto the GD-ROM drive, and install the GD-ROM drive onto the ASSY MAIN BD.

- Unpack the shipping crate, and take out the GD-ROM drive, GD-ROM drive bracket, and GD-ROM disc.



GD DRIVE BRACKET

GD-ROM DRIVE

PHOTO 6. 6 a

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● Use the 4 tapping screws to fix the GD-ROM drive bracket onto the GD-ROM drive. Be careful about a fixing direction.

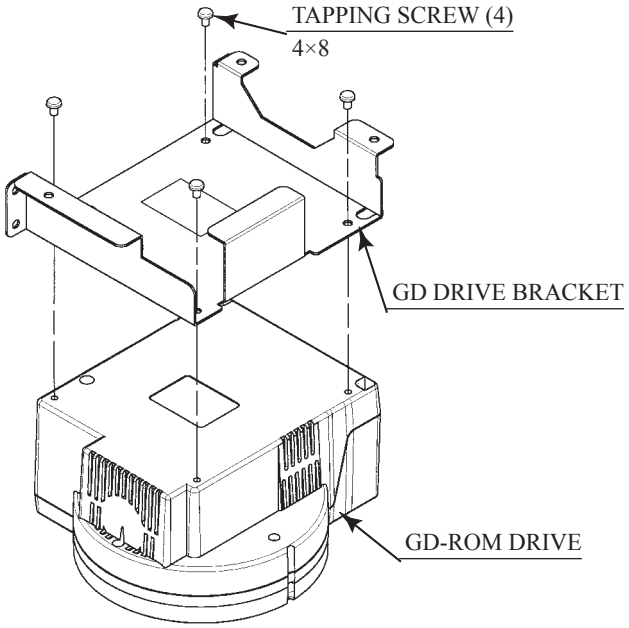
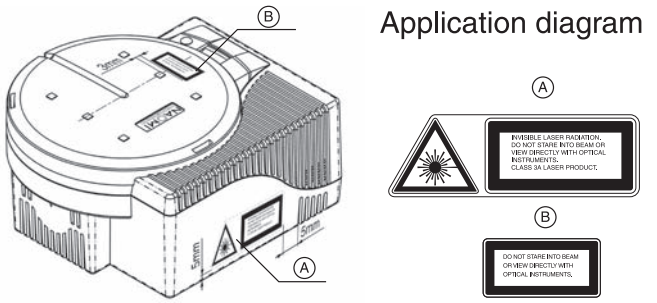


FIG. 6. 6 a



Please follow the drawing and place the sticker with the right language.

FIG. 6. 6 b

CAUTION for U. S. A., Europe, and Australia:
Attach the 2 caution stickers for a laser ray onto the GD-ROM drive.

● Remove the 1 truss head screw that fixes the GD-ROM drive lid (DISC LID). And turn clockwise the lid to remove.

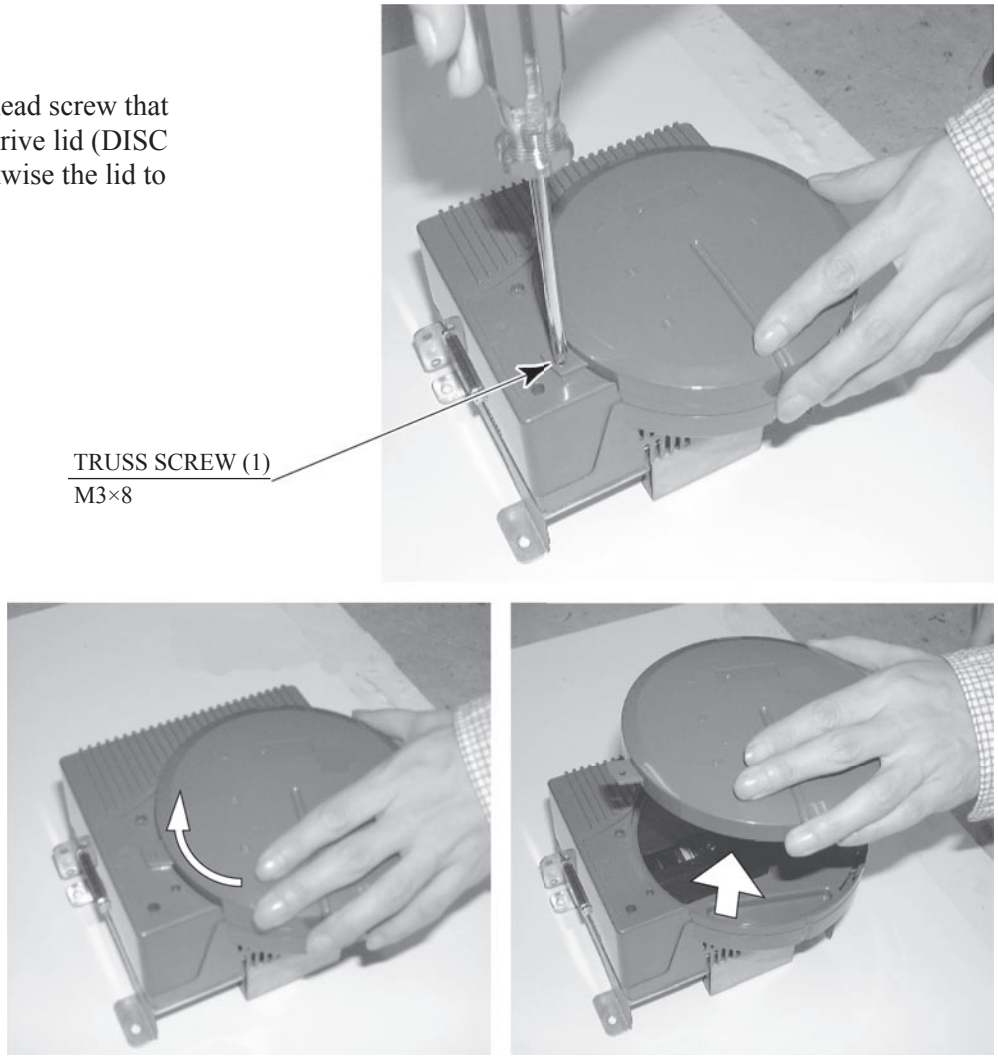


PHOTO 6. 6 b

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- Set the GD-ROM disc onto the GD-ROM drive with its labeled side facing upward.
- Return the lid to its original place, and fix it with 1 truss head screw. Be careful not to fasten the screw too tightly.

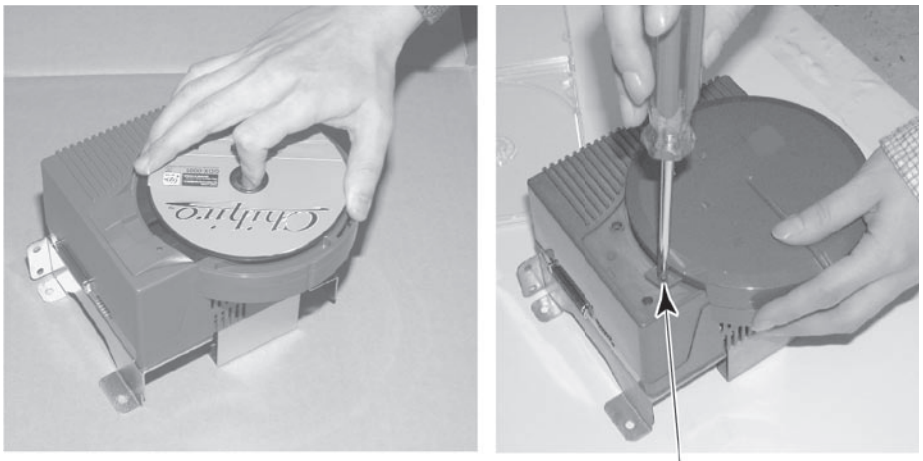

PHOTO 6. 6 c

- Remove the side door R from the main cabinet. Undo the 2 truss screws and open the lock.

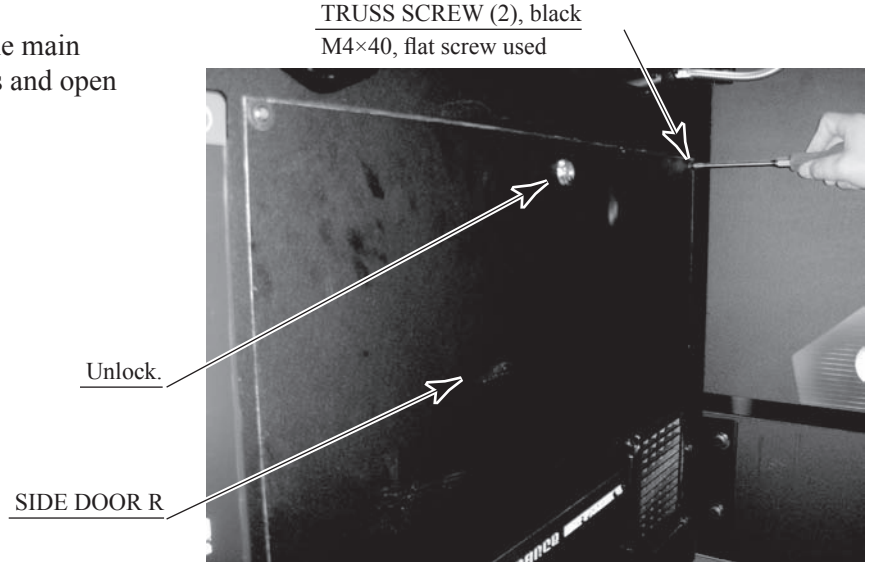

PHOTO 6. 6 d

- Unplug the single connector that connects the internal cabinet wire to the ASSY MAIN BD inside the main cabinet.

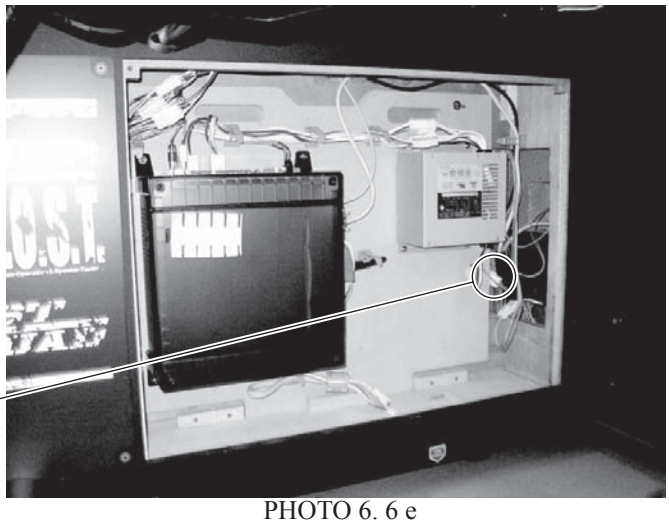

PHOTO 6. 6 e

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● Unplug the 3 connectors.

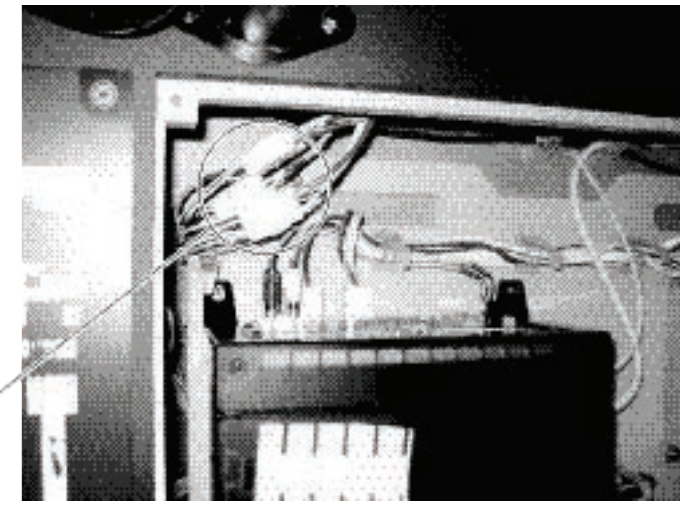

PHOTO 6. 6 f

● Undo the fixing screws on the left and right sides of the D-SUB connector that connects to the side of the game board on the ASSY MAIN BD. Unplug the USB connector.

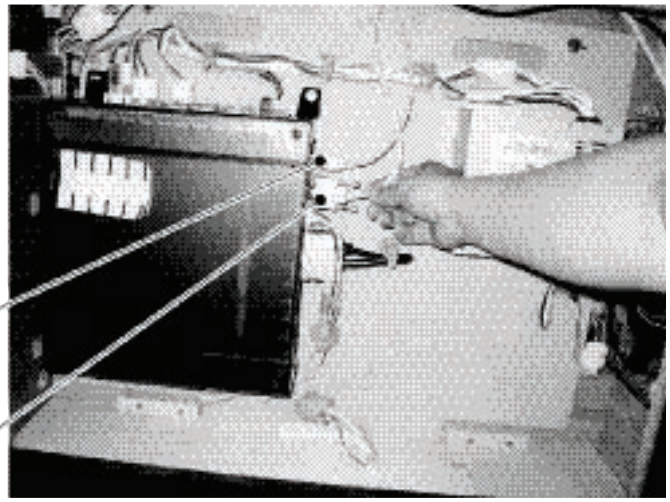

PHOTO 6. 6 g

● Remove the 2 screws that fix the ASSY MAIN BD's base (a wooden base).

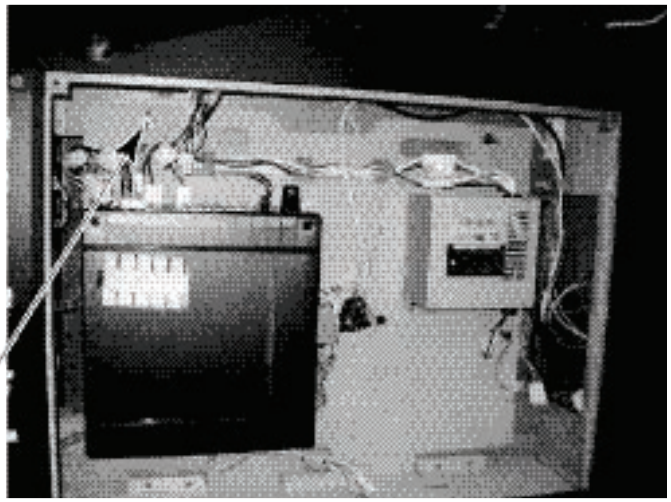

PHOTO 6. 6 h

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- Take out the ASSY MAIN BD from the main cabinet. Be careful not to damage the wires in this instance.

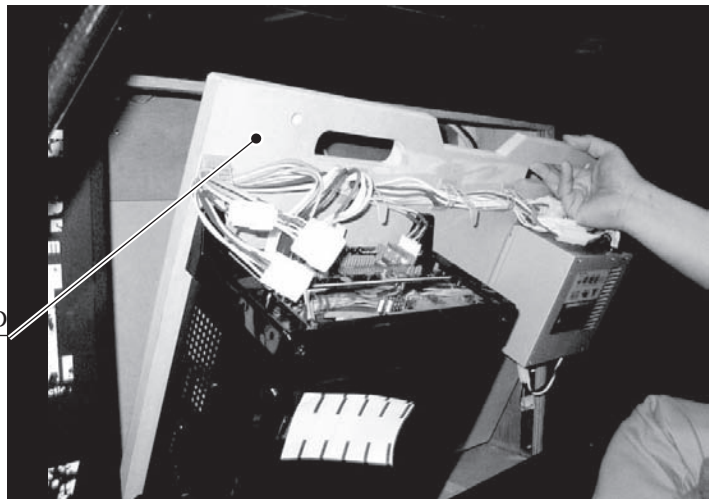

PHOTO 6. 6 i

- Place the ASSY MAIN BD on a flat horizontal surface.

- Using the 4 screws, fix the GD-ROM drive onto the ASSY MAIN BD.

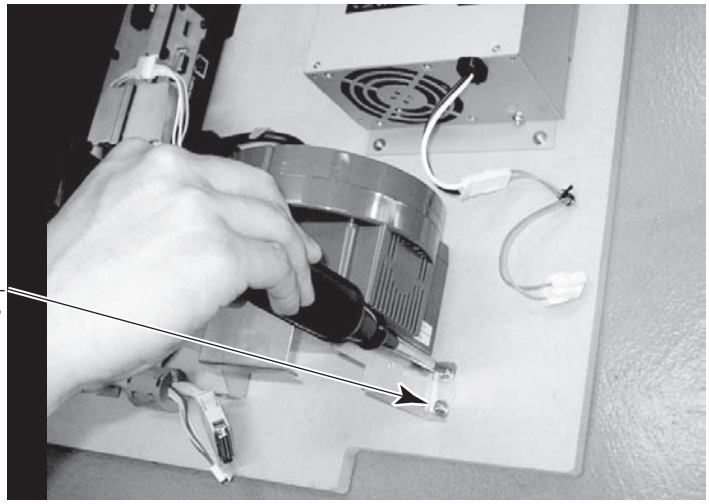

PHOTO 6. 6 j

- Insert both the GD cable connector (for data communication) and the power cord connector (JST NH6P) into the GD-ROM drive. Be careful about an inserting direction in this instance. Make sure that the connectors are inserted firmly and completely.

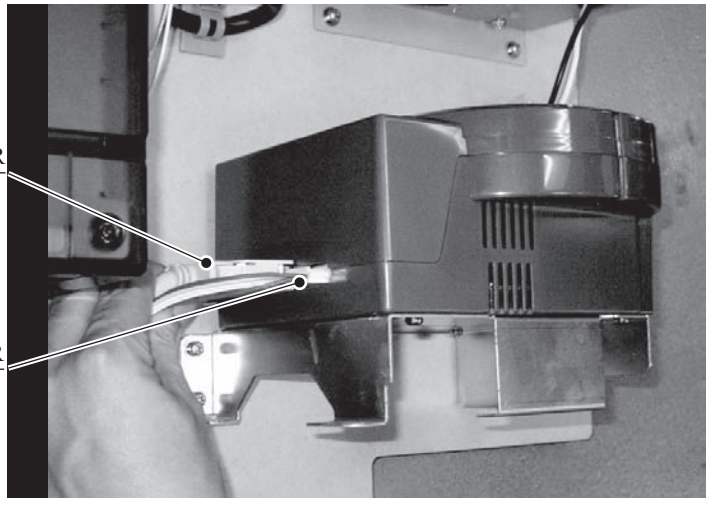

PHOTO 6. 6 k

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- Insert Key Chip straight into the hole on the Media Board side of upper part of the Game Board. Be sure to check the alignment of the key chip and push it all the way in.

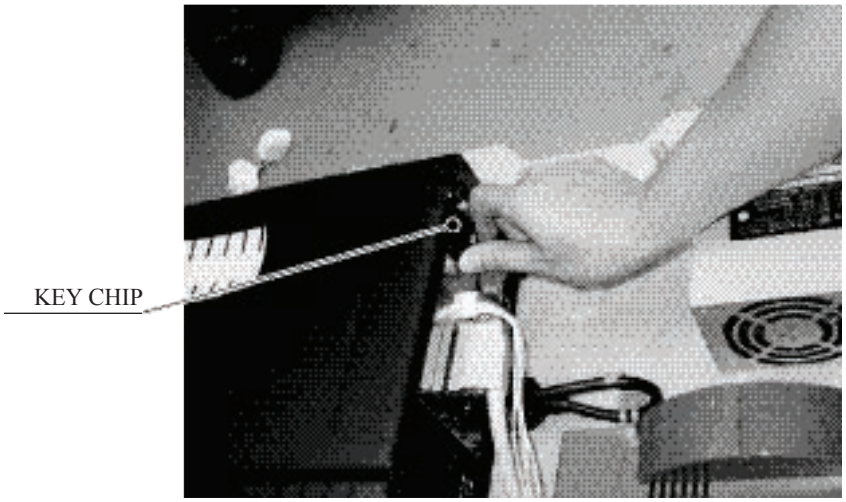

PHOTO 6. 6 l

- Affix the enclosed stickers to the Game Board. Affix the 843-****D-02 sticker to the Main Board and the 843-****B sticker to the Media Board. Place the both stickers on top of the stickers already affixed.

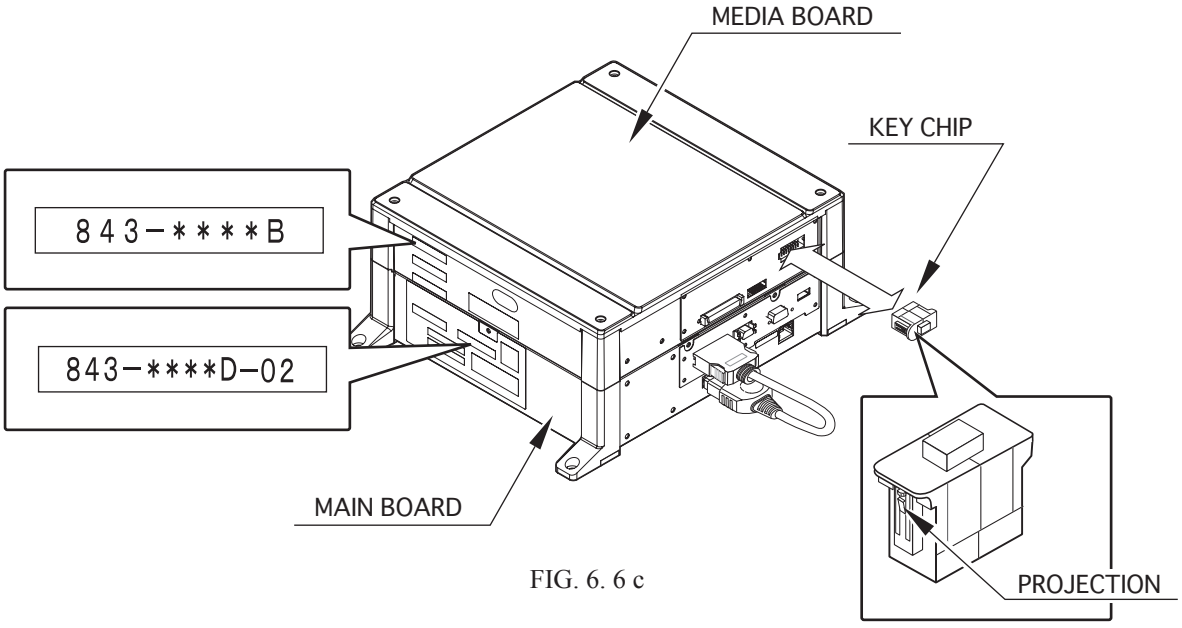

FIG. 6. 6 c

- Return the ASSY MAIN BD (now installed with the GD-ROM drive) into the main cabinet. Following the above-described actions in a reverse order, fix the base, connect the connectors, and clamp the wires/ cables.

- Return the side door R to the main cabinet.

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7 POWER SUPPLY AND EARTH CONNECTION

WARNING!

- Be sure to independently use the power supply socket outlet equipped with an Earth Leakage Breaker. Using a power supply without an Earth Leakage Breaker can cause a fire when electric leakage occurs.
- Ensure that the "accurately grounded indoor earth terminal" and the earth wire cable are available (except in the case where a power cord plug with earth is used). This product is equipped with the earth terminal. Connect the earth terminal and the indoor earth terminal with the prepared cable. If the grounding work is not performed appropriately, customers can be subjected to an electric shock, and the product's functioning may not be stable.
- Ensure that the power cord and earth wire are not exposed on the surface (passage, etc.). If exposed, they can be caught and are susceptible to damage. If damaged, the cord and wire can cause electric shock and short circuit accidents. Ensure that the wiring position is not in the customer's passage way or the wiring has protective covering.
- After wiring power cord on the floor, be sure to protect the power cord. Exposed power cord is susceptible to damage and causes an electric shock accident.

The AC Unit is located on back side of Cabinet. The AC Unit has Main SW, Earth Terminal and the Inlet which connects the Power Cord.

- Ensure that the Main SW is OFF.

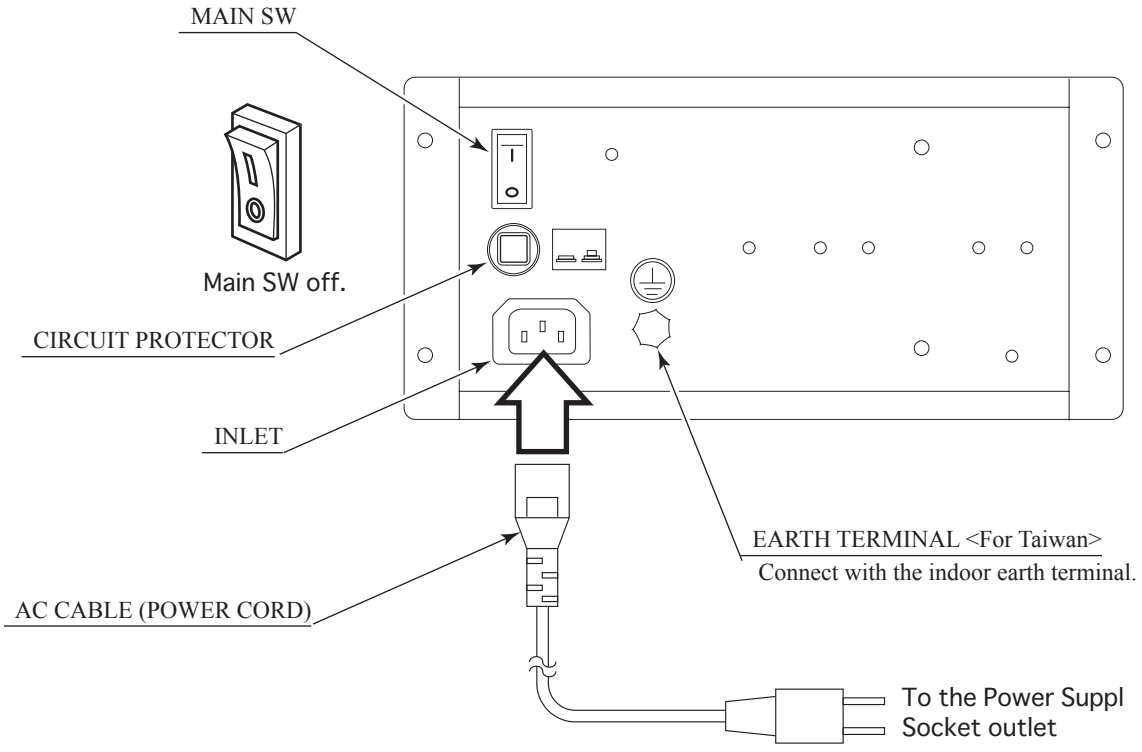

FIG. 6. 7 a AC UNIT

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- Connect one end of the earth wire to the AC Unit earth terminal, and the other end to the indoor earth terminal. The AC Unit earth terminal has a Bolt and Nut combination. Take off the Nut, pass the end of earth wire through the Bolt, and fasten the Nut. <For Taiwan>

  *Note that the Earth Wire is incorporated in the Power Cord for the Areas of AC 120 V (USA) and AC 220~240 V, and therefore, this procedure is not necessary.

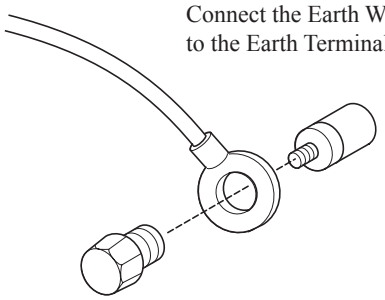


FIG. 6. 7 b *Earth Wire Connection

- Firmly insert the power plug into the socket outlet.
  Insert the opposite side of Power Cord plug to the AC Unit's connector ("INLET").

- Perform wiring for the Power Cord and Earth Wire. Install protective covering for the Power Cord and Earth Wire.

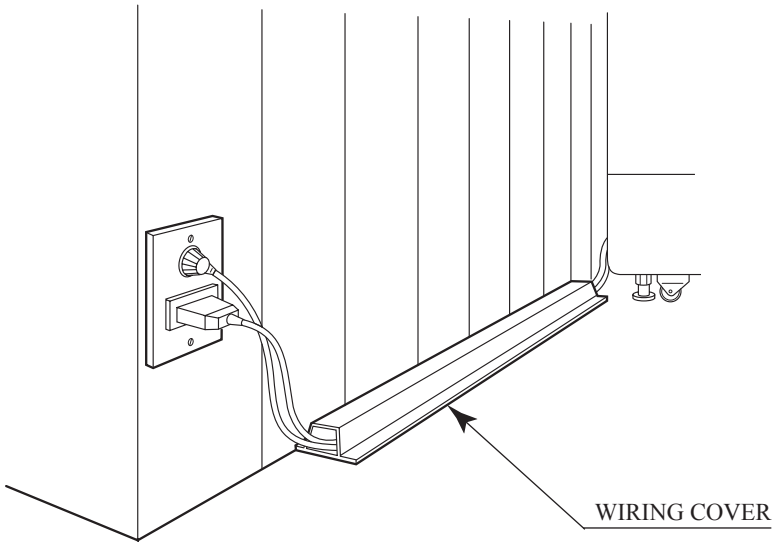
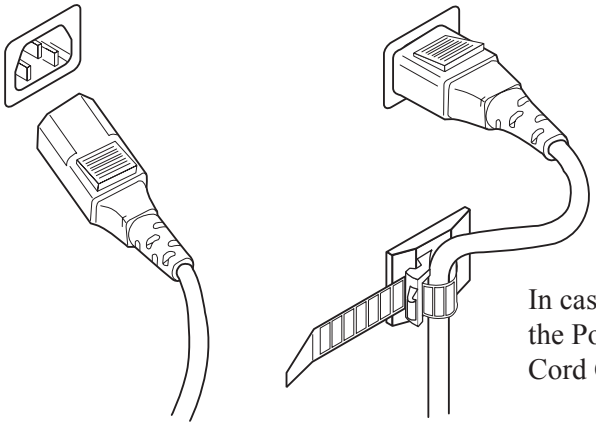


FIG. 6. 7 c Connecting Power Cord and Earth Wire



In case the Power Plug is apt to come out of place, secure the Power Cord to the periphery of the AC Unit with the Cord Clamp (an accessory).

FIG. 6. 7 d HOW TO USE THE CORD CLAMP

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8 TURNING THE POWER ON

Turn the main switch on the AC unit on to turn the power on. When the power is turned on, the fluorescent lights in the billboard and instruction panel turn on. A few second later, the system startup screen is displayed, then the waiting screen for customers (advertising screen) is displayed.

The time required for the advertising screen to appear can vary between several tens of seconds and a few minutes. The time is not necessarily the same each time. This is due to the rechargeable battery in the GD-ROM system, and does not represent a malfunction.

Audio begins playing from the speakers on the left and right sides of the main cabinet at the same time the advertising screen is displayed. In addition, the halogen lamp, left and right controller holder LEDs, and the LED under the IC card unit all light up. However, if the game has been configured to not play sounds during advertising, then no sound is produced.

Even after you turn the power to this product off, the number of credits and ranking data are preserved. However, the number of excess coins (the number of coins that have been inserted that do not add up to a full credit) and bonus adder count data are not preserved.

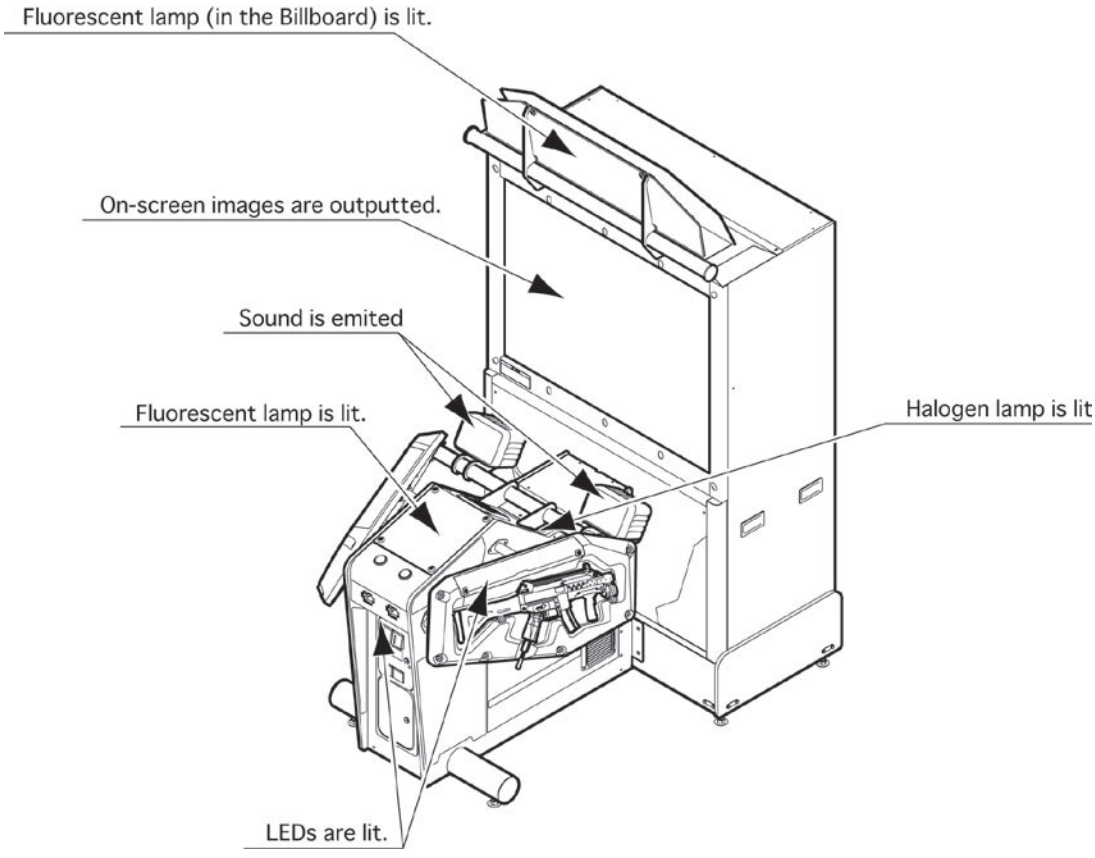

FIG. 6. 8

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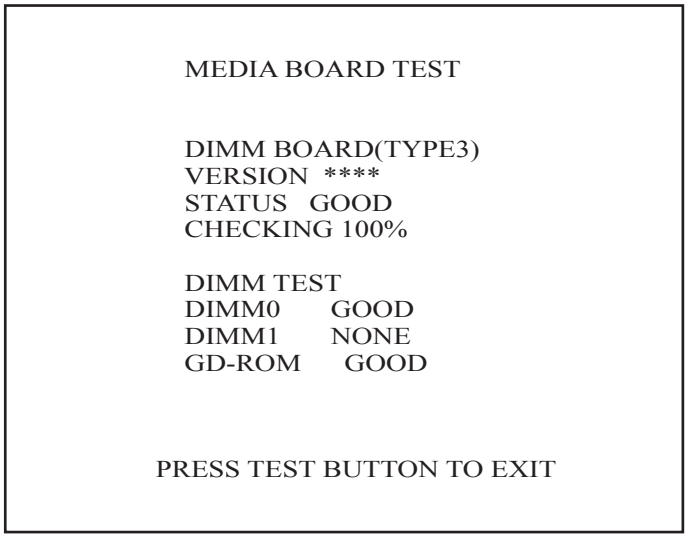
9 ASSEMBLY CHECK

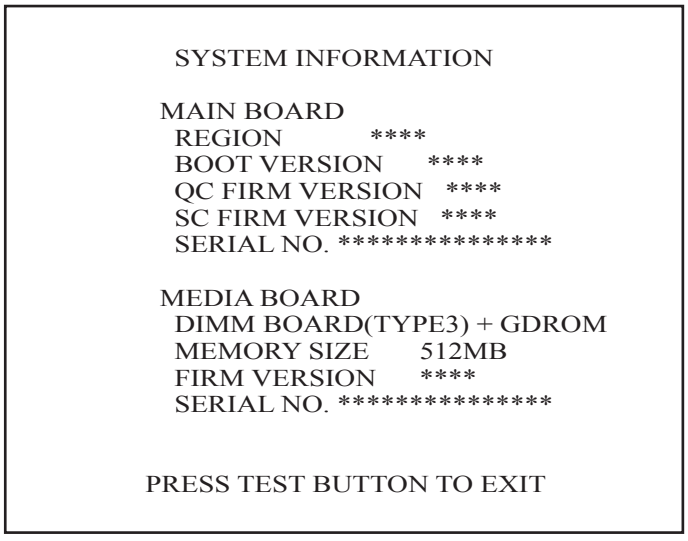
In the TEST MODE, ensure that the assembly has been made correctly and IC BD. is satisfactory (refer to Section 9).
In the test mode, perform the following test:

9-1 MEMORY TEST

When "MEDIA BOARD TEST" is selected from the System Test Mode Menu Screen the Game Board memory is automatically tested. If the display beside each memory reads "GOOD", the Game Board is functioning correctly.
Also, when "SYSTEM INFORMATION" is selected, Main Board and Media Board data for the Game Board are displayed. If data is displayed correctly, the Game Board is functioning correctly.



MEDIA BOARD TEST screen



SYSTEM INFORMATION screen

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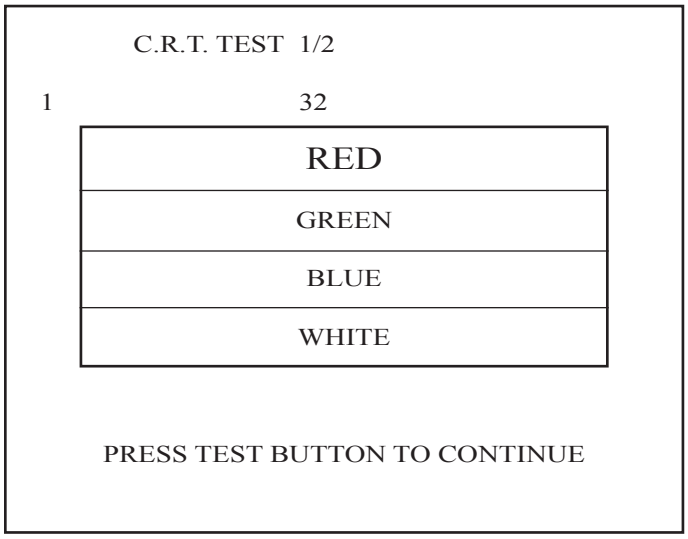
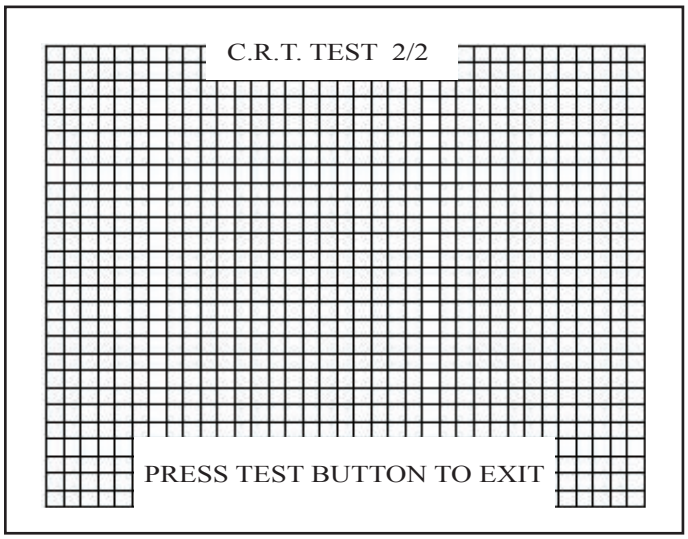
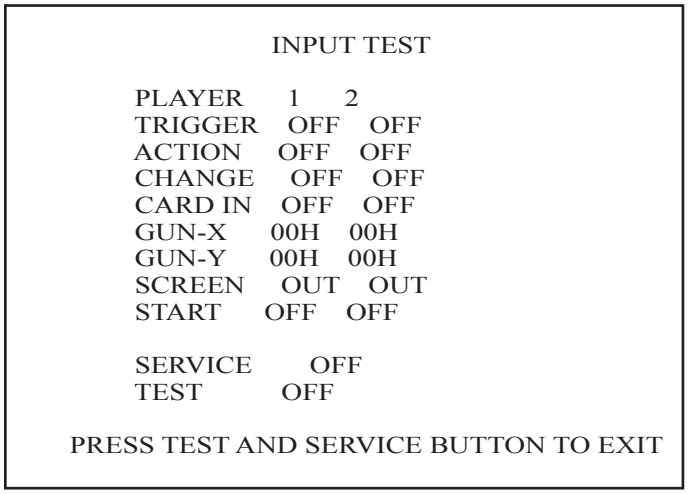
9-2 C.R.T. TEST



In the TEST mode menu, selecting C.R.T. TEST allows the screen (on which the projector is tested) to be displayed. Although the projector adjustments have been made at the time of shipment from the factory, make judgment as to whether an adjustment is needed by watching the test mode screen. If it is necessary, adjust the projector by referring to Section 12.



9-3 INPUT TEST



Selecting the INPUT TEST on the game test mode menu screen causes the screen (on which each switch is tested) to be displayed. Press each switch. If the display beside each switch indicates "ON," the switch and wiring connections are satisfactory.

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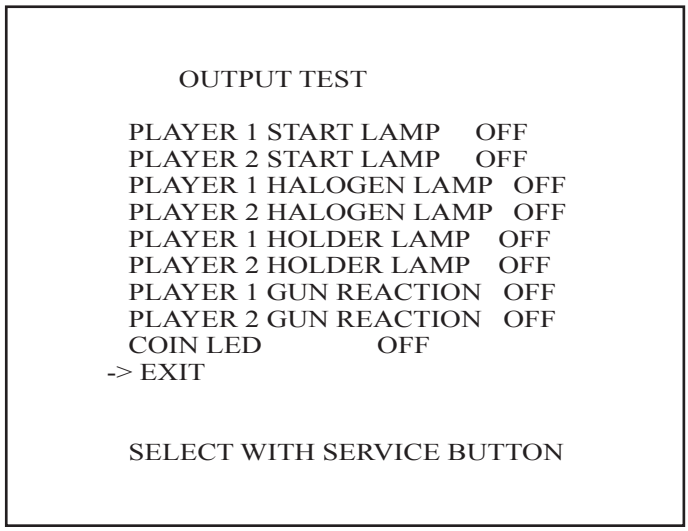
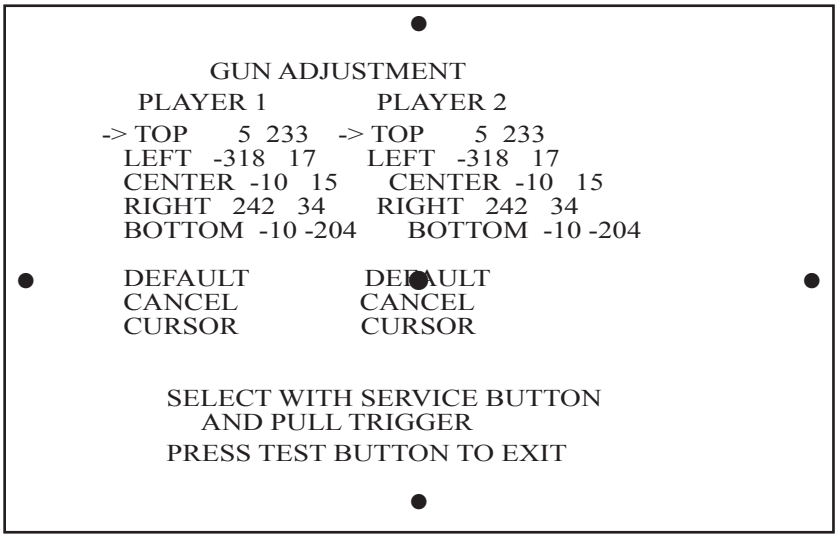
9-4 OUTPUT TEST

Select OUTPUT TEST from the menu in the test mode to cause the screen (on which each lamp and wiring connections are tested) to appear. Ensure that lamp light up satisfactorily.



9-5 GUN ADJUSTMENT

Before starting the operation, play the game by yourself and make sure that the gun readjustment is not needed and that you can play the game without a problem. Although completed at the factory, the gun adjustment may be necessary because of the moving/shipping divergence.



Perform the above inspections also at the time of monthly inspection.
As for the gun adjustment described in Part (5) above, weekly confirm that the gun is properly adjusted.

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Interference Prevention Wiring

WARNING!

- In order to prevent electric shock and short circuit hazards, be sure to turn power off before performing work.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a fire risk.
- Do not expose the IC BD, etc. without a good reason. Failure to observe this can cause electric shock hazard or malfunctioning.
- Work should be performed by the Location's Maintenance Man or technical personnel. Performing work by those who do not have technical knowledge and expertise can cause electric shock accident or malfunctioning.

When the game machines of a same or similar type are installed side by side, their sensors may interfere with each other. To reject the interference, follow the procedure below.
The following game machines employ a same or similar type of sensor. If interference happens to the sensors, operation of the games may be mutually disturbed.

- THE HOUSE OF THE DEAD 2, U/R type, DX type and Super DX type
- DEATH CRIMSON, U/R type and DX type
- THE LOST WORLD, U/R type, DX type and Super DX type
- BRAVE FIRE FIGHTERS
- SAMBA DE AMIGO
- CONFIDENTIAL MISSION, U/R type and DX type
- SHAKATTO TAMBOURINE
- LUPIN THE 3RD THE SHOOTING, U/R type and DX type
- THE MAZE OF THE KINGS, U/R type and DX type
- THE HOUSE OF THE DEAD 3, U/R type and DX type
- VIRTUA COP 3, U/R type and DX type
- GHOST SQUAD, U/R type and DX type

- Turn the power off.
- Undo the 2 truss screws and remove the side door L from the main cabinet.

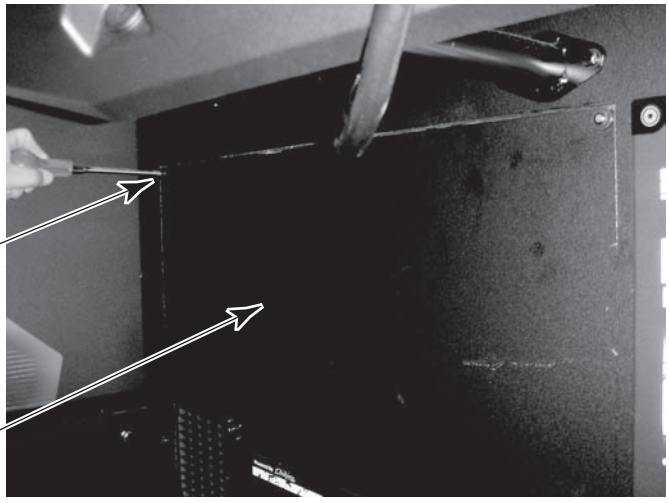

PHOTO 6. 9 a

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- The interference prevention wire is connected to the sensor board on the lower right side.

  If multiple units of the same game are installed side by side, make sure that the game units that are connected to the interference prevention wires are arranged so that they alternate with the units that are not connected.

INTERFERENCE PREVENTION WIRING
CTF-60013

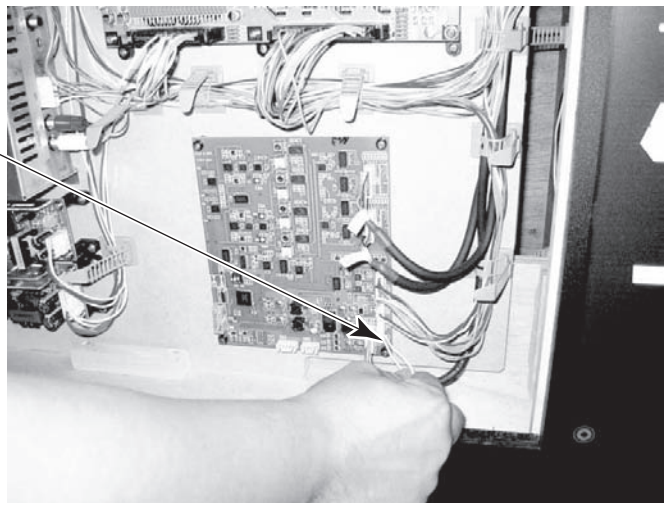

PHOTO 6. 9 b

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7. PRECAUTIONS WHEN MOVING THE MACHINE

WARNING!

- When moving the machine, be sure to pull out the plug from the power supply. Moving the machine with the plug as is inserted can cause the power cord to be damaged and could result in a fire and or electric shock.
- When moving the machine on the floor, retract the Adjusters and ensure that Casters make contact with the floor. During transportation, pay careful attention so that Casters do not tread power cords and earth wires. Damaging the power cords can cause an electric shock and or short circuit.
- In places where step-like grade differences exist, be sure to separate the PTV, PTV Cabinet, and the Controller Cabinet. Inclining the PTV as is mounted on the PTV Cabinet can cause the PTV to fall off from the Base and result in injury.
- When lifting the cabinet, be sure to hold the grip portions or bottom part. Lifting the cabinet by holding other portions can damage parts and installation portions due to the empty weight of the cabinet, and cause personal injury.
- When moving the PTV, do not push it from the rear side. Push it from sideways. Pushing the PTV from the rear side can have the PTV fall down, causing personal injury etc. In case the floor has slanted surfaces or step-like differences, be sure to move the machine by 2 or more persons.
- When the Cabinet is disassembled, the detached Controller Cabinet may be unstable. If it is carelessly pushed, it can fall and cause accidents. When the Control Cabinet is detached, place it in on a level surface and be careful not to tip it right or left when moving it.

CAUTION!

- Do not move the product with a GD-ROM disc inside. Remove the GD-ROM disc before moving the product.
  Failure to observe this instruction may cause the GD-ROM disc and/or GD-ROM drive to be damaged.
- Do not hold or press the plastic parts as indicated by the Figure 7c. Failure to observe this instruction may break the parts, and eventually the broken pieces may cause a personal injury.
- When moving the machine, be sure to remove the foot pedals. Moving with the foot pedals may cause an accident, and deform or damage the part/floor.

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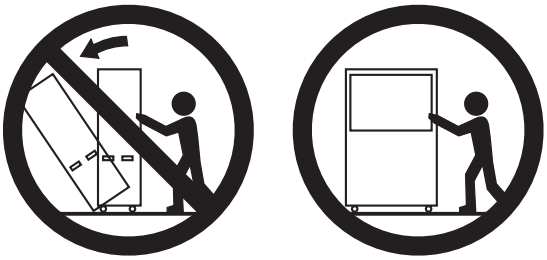
Do not push PTV from the back. Pushing the PTV from the back can cause the PTV to fall down. Push it from the side.



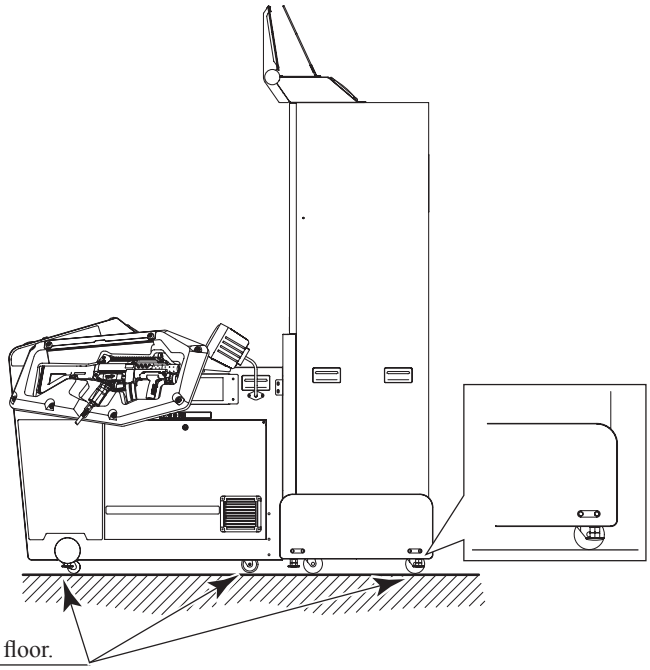


FIG. 7 a

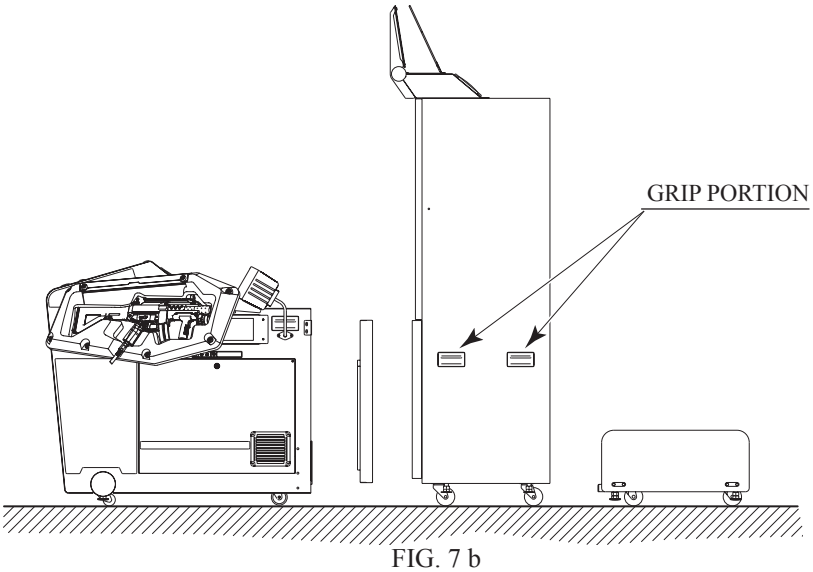


FIG. 7 b

When transporting the product in places with steps or step-like differences in grade, disassemble into each unit before transporting.

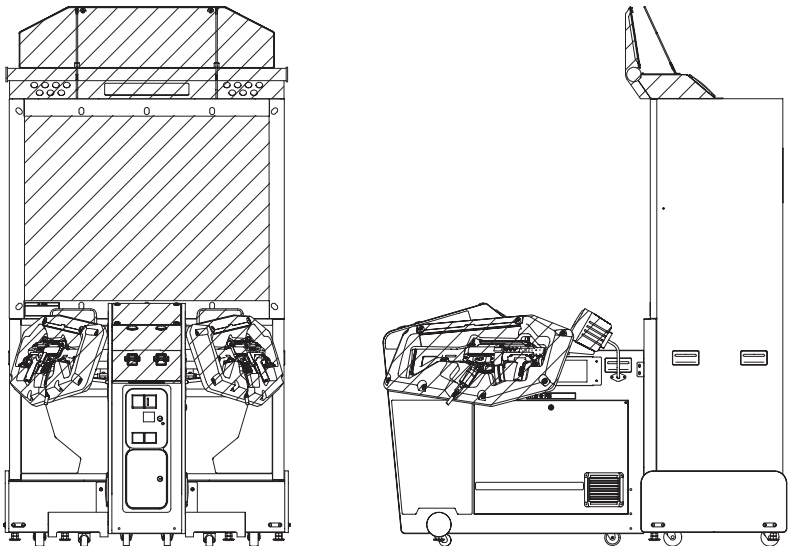


FIG. 7 c

Do not hold press these hatched parts to move the product.

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Cautions When Transporting the Machine

- Do not tie machine down using Plastic Parts as an anchor.
  When using straps or tie downs (rope etc), use caution. Use protective material where tie downs contact machine to avoid damage.
  To keep machine from shifting during transport, be certain all leg adjusters are in contact with the pallet.

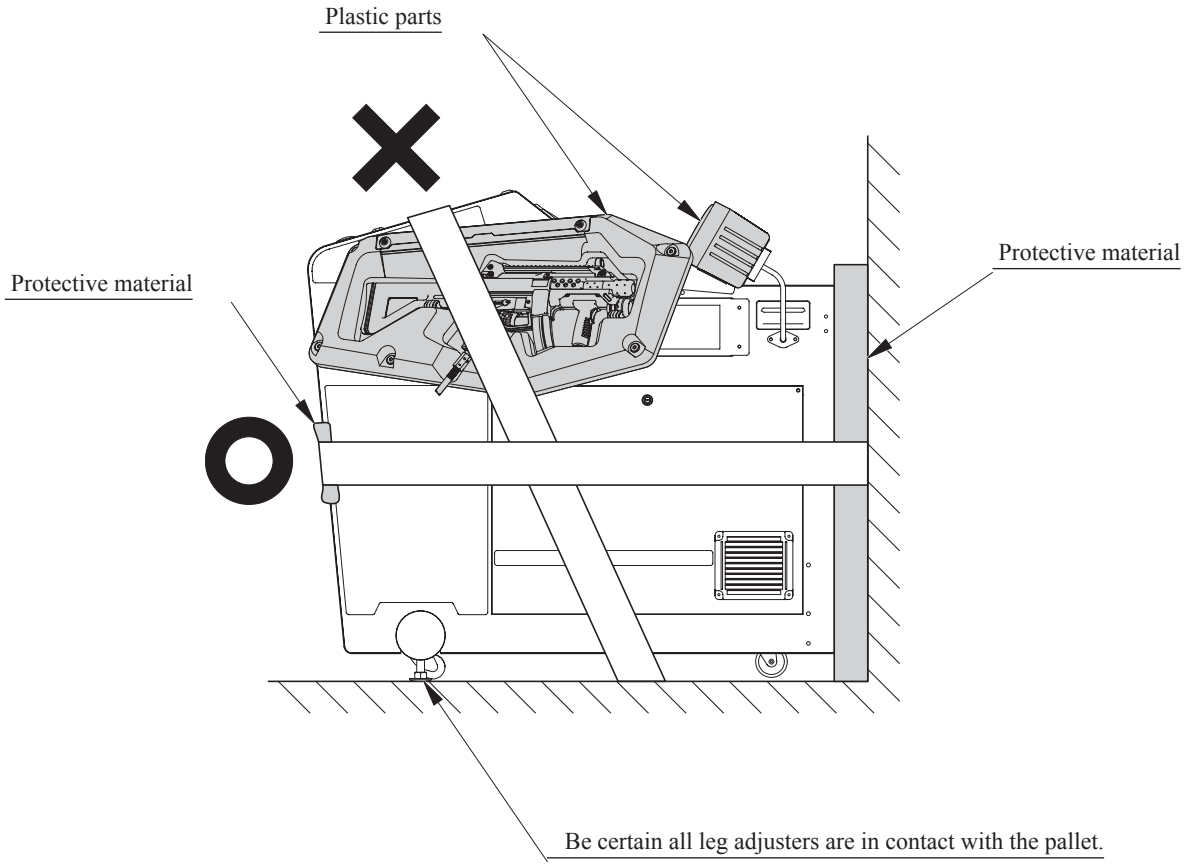

FIG. d

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8. GAME DESCRIPTION

The following explanations apply to the case the product is functioning satisfactorily. Should there be any moves different from the following contents, some sort of faults may have occurred. Immediately look into the cause of the fault and eliminate the cause thereof to ensure satisfactory operation.

The fluorescent lights in the billboard and in the instruction panel are always on whenever the power is turned on. Demo movies and game rankings are displayed on the screen.
In addition, the halogen lamp, the left and right controller holder LEDs and the LED under the IC card unit are all turned on. Audio may also be played from speakers on the left and right sides of the main cabinet. However, it is possible to select whether sound is played during advertising or not using the Test mode settings.

Each of the right and left start buttons is integrated with a light. The light flashes when coins are inserted sufficiently for a play. The light goes out when the start button is pressed to start the game.
Press the appropriate start button to begin play as 1P or 2P. If enough credits for a game are remaining, the other player's START button will flash. Press the flashing START button to join a game.

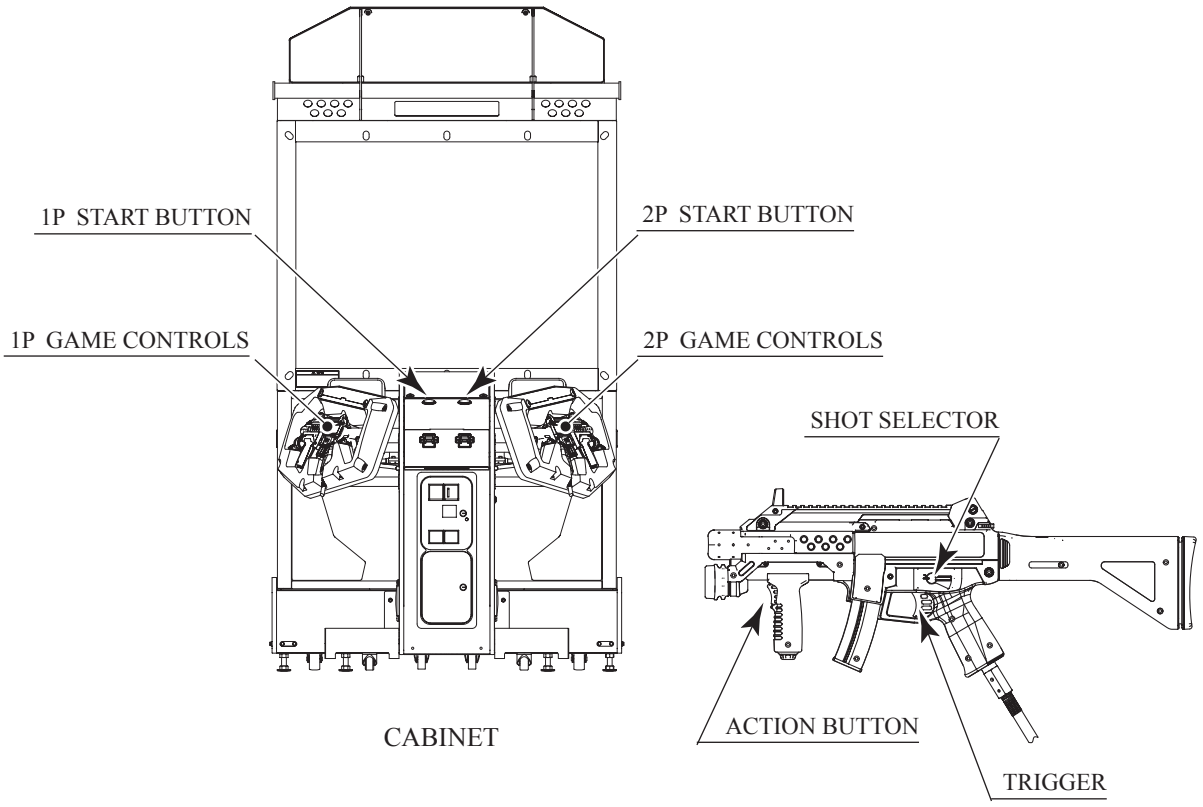

FIG. 8

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This manual explains the game details when used with IC Cards.
The game content for cabinets without IC Card Units or games played without the use of an IC Card ("Only without the IC Card") is explained separately as needed.

(1) GAME OUTLINE

The player is a member of the special forces unit, "Ghost Squad", out to suppress vicious terrorists. Each mission contains multiple routes, allowing the player to choose how to proceed. Special events occur throughout the game depending on the route chosen, such as securing hostages or providing friendly cover fire.

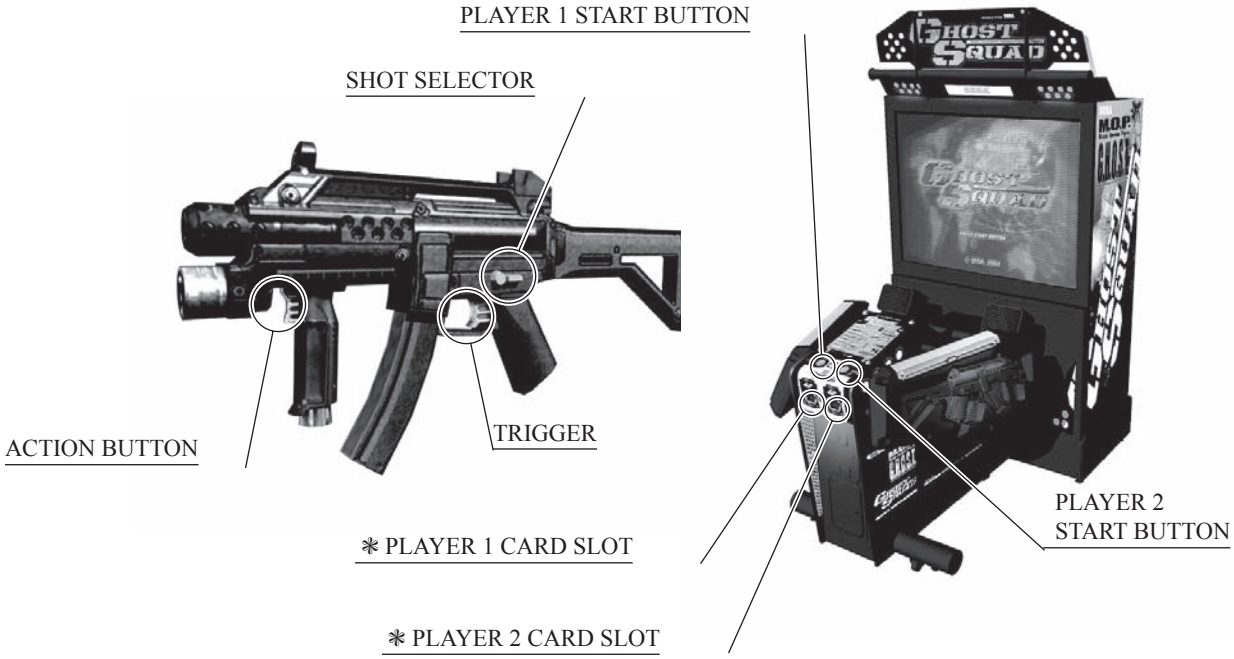
This game also supports the use of IC Cards.
Players can enjoy a number of additional features recorded on IC Cards, including character name, score, experience accumulation, changes in rank, item collection, and added mission routes and events.
Plus, by using the password displayed following a game, players can also access an Internet Ranking.

[When no IC Card is being used, the recording of player information and Internet Ranking access are not available. Also, play will be limited to certain mission routes and items.]

(2) GAME CONTROLS

The game is controlled with the cabinet START buttons and the provided sub-machinegun-style gun controllers.
Each gun controller is equipped with 3 buttons, the TRIGGER, ACTION and SHOT SELECTOR buttons.

- START BUTTON: Used for starting the game and skipping event descriptions.
- TRIGGER : Used for firing (shooting bullets) and panel selection.
- ACTION BUTTON : Used during events and for skipping demo scenes.
- SHOT SELECTOR : Used to switch between firing modes (single shot, 3-shot burst, full auto).



[✻: Only for cabinets equipped with IC Card Units.]

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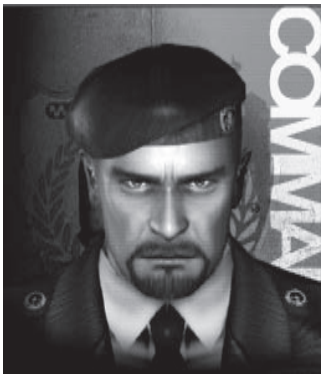
(3) CHARACTERS

● Alpha Unit

The Alpha Unit are the main characters in the game and are young hot-shot members of "Ghost Squad", an unofficial unit of the anti-terrorist group, "M.O.P." (Multiple-Operation-Program)

● Fellow M.O.P. Members

The Commander provides radio backup and pertinent advice to the Alpha Unit.
Also assisting the Alpha Unit in operations are Bravo Unit and Charlie Unit. These two units assist the players in suppressing the terrorist threat.



COMMANNDER

UNIT BRAVO

UNIT CHARLIE

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(4) GAME FLOW AND ON-SCREEN DISPLAY

● Card Insertion Screen [Only with the IC Card]

The IC Card Insertion Screen is displayed when starting a game.
Insert an IC Card into the card slot to read stored data.
To play a game without using an IC Card, select the "Start game without card." panel.
IC Card updates are also handled on this screen. Insert an old IC Card together with a new IC Card to transfer play data to the new card.
The game can be started directly after completing the update. (✻Refer to the additional update description section.)

IC Card Insertion Screen

Screen following IC Card insertion

● Player Information Display Screen [Only with the IC Card]

After starting a game with an IC Card, the player information read from the card is displayed.
On this screen, the following information can be confirmed: Player name, remaining number of card uses, rank, level, experience points, number of plays, top score, number of weapons attained, number of costumes attained, weapon currently being used, costume currently being worn.

Player Information Screen

On this screen, select GAME START to begin the game with the same weapon and costume used in the previous game.
To change the weapon or costume, select the CUSTOMIZE panel to go to the Customize Screen.

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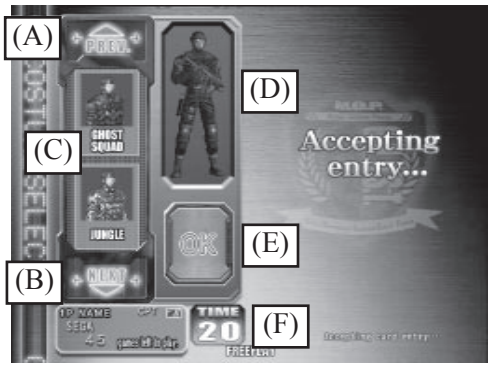
● Customize Screen [Only with the IC Card]

On the Customize Screen, weapons and costumes can be changed.
With sufficient game progress, name change and screen display type selection also become available.

Customize Screen



Customize Select Screen

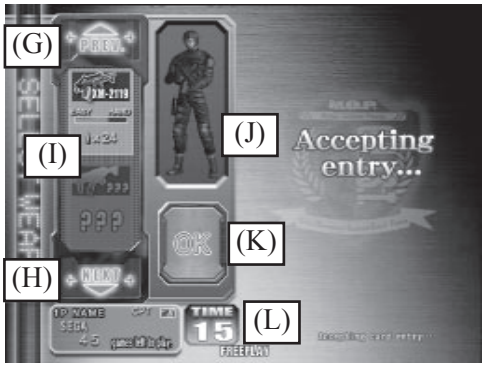
(A)(B) Item Scroll Buttons
Scrolls through costume type indicators. Rapid scrolling is possible by keeping it held down.

(C) Selectable Costumes
Line up the cursor and pull the trigger to select a costume.

(D) Current Costume
Displays the currently selected costume as worn by the character.

(E) OK Button
Sets the selected costume and returns to the menu.

(F) Remaining Time
The currently selected costume is selected automatically if the remaining time reaches zero.



Select Weapon Screen

(G)(H) Item Scroll Buttons
Scrolls through weapon type indicators. Rapid scrolling is possible by keeping it held down.

(I) Selectable Weapons
Line up the cursor and pull the trigger to select a weapon.

(J) Current Weapon
Displays the currently selected weapon as held by the character.

(K) OK Button
Sets the selected weapon and returns to the menu.

(L) Remaining Time
The currently selected weapon is selected automatically if the remaining time reaches zero.

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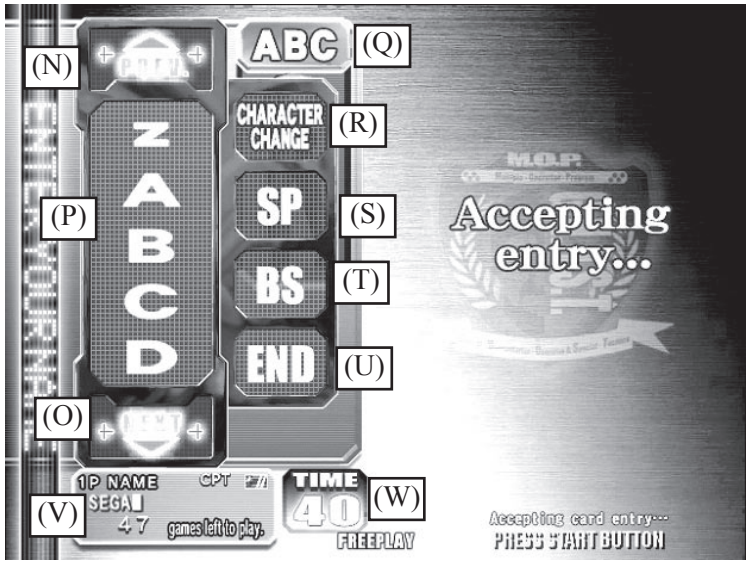
● Customize Screen [Only without the IC Card]

Starting the game without an IC Card will display the following screen and allow weapon and costume selection.

● Name Entry Screen

When starting a game with a new IC Card, the Name Entry Screen is first displayed.
A name chosen once can later be changed on the Customize Screen. In both cases, the Name Entry Screen shown below is used.
[When no IC Card is being used, this name will be used to display the score if it makes the cabinet ranking.]



Name Entry Screen

(N)(O) Character Scroll Buttons
Scroll through selectable characters (letters). Rapid scrolling is possible by keeping it held down.

(P) Selectable Characters
Line up the cursor and pull the trigger to select a character.

(Q) Current Character Type
Displays the current name entry character type.

(R) Character Change Button
Changes the character type.

(S) Space Button

(T) Backspace Button

(U) END Button
Sets the entered name.

(V) Name as Entered

(W) Remaining Time
The currently entered name is used if the remaining time reaches zero.

Names up to 16 characters in length can be entered, using alphanumeric and symbol character types.

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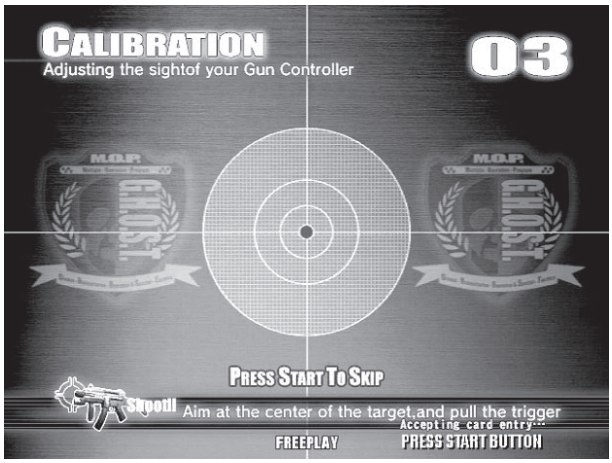
● Gun Controller Explanation Screen

Exiting the Customize Menu plays the demo explaining how to use the gun controller.
This explains the shooting stance, and how to use the SHOT SELECTOR and ACTION button.
It is possible to skip this explanation with the START button.

Gun Controller Explanation Screen

● Gun Controller Calibration Screen

If the CALIBRATION setting in the game Test Mode is turned on, this screen is displayed before starting the game.
Holding the gun controller correctly, aim at the target bulls-eye and pull the trigger to calibrate the gun.
Press the START button to exit the Calibration Screen without waiting for the time limit to run out.



Gun Controller Calibration Screen

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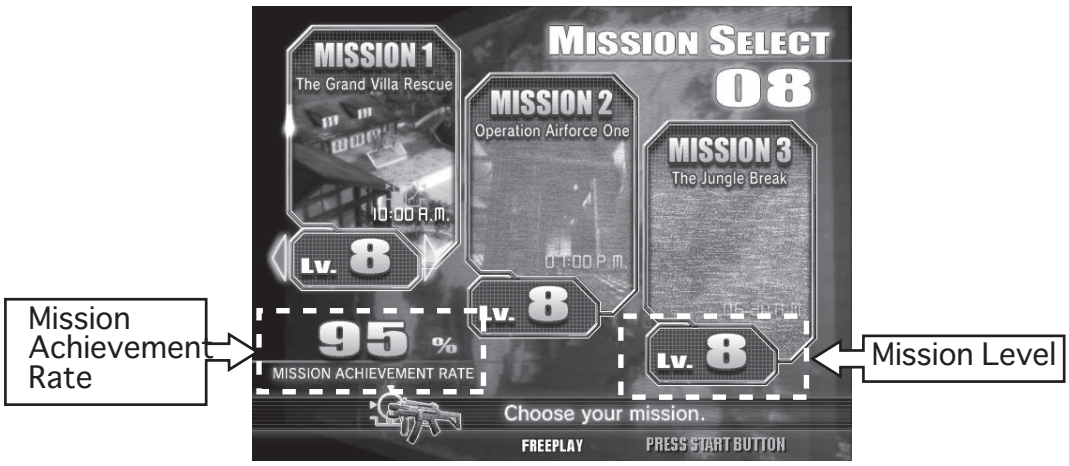
● Mission Select Screen

On this screen, the player selects which mission to play from 3 available missions.
Playing one mission all the way to the end displays this screen once again, allowing the player to select another mission.
A mission played once cannot be played again in the same game.



Mission Select Screen

The Mission Level is displayed on the Mission Select Screen.
Using an IC Card, the Mission Level will increase each time the boss is defeated.
To replay missions at a lower level, line up the curser with the Mission Level display and push the ACTION button. By changing the level, it is possible to play at the desired level.

[When no IC Card is being used, only Mission Level 1 to 4 can be selected from the beginning, and the Mission Achievement Rate is not displayed. There are no differences in game characteristics such as difficulty, game play changes, or the number of game events.]

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● In-game Display

During game play, information such as life and remaining ammunition is displayed.

(1) Life (remaining health) : The color will grow red as it nears zero.
(2) GS Meter : Special Points accumulated during the game are shown here.
(3) Player Information : Player name and ranking insignia are displayed. [Only with the IC Card]
(4) Score : Points accumulated during play.
(5) Mission Level : Level of the current mission.
(6) Terrorist : Find and suppress!
(7) Fellow Troops : Members of the "Ghost Squad".
(8) Correspondence : Support requests from fellow troops, or advice from the Commander appears here.
(9) Firing Mode : Selectable firing modes and the currently selected firing mode are displayed.
(10) Weapon Information : Equipped weapon and remaining magazine ammunition are displayed.
(11) Auxiliary Item : Any currently effective auxiliary items are displayed.

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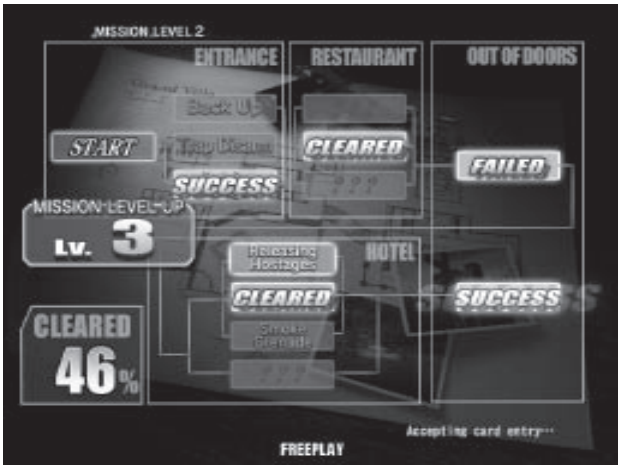
● Mission Results Screen [Only with the IC Card]

After either successfully completing a single mission or dying partway, the Mission Result Screen is displayed.

Mission information, including the route taken or event results, can be confirmed on this screen.

This screen also displays a notification if the Mission Level has increased.

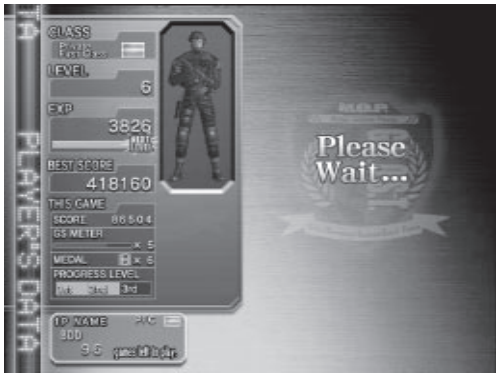


- Box showing "???" : Event to debut at a higher Mission Level.
- Gray, labeled box : Not yet played despite a sufficient Mission Level.
- Blue box : Already played, but not cleared.
- Green box : Cleared sometime in the past.

● Game Results [Only with the IC Card]

Playing a game with an IC Card allows viewing of the game's play results following the game.

Any notifications of leveling up, rank promotion, obtaining weapons/costumes, and so on, are displayed on this screen.



Game Results Screen

Nice job! You have been promoted!

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(5) GAME RULES AND GAMEPLAY

Life

During play, the player's life is displayed at the top part of the screen.
Life is diminished by enemy attack or accidental fire on hostages.
Once the player's life runs out, play stops.

The amount of life to start a game with can be configured in Test Mode settings.
Changing life settings will not affect the length of the life gauge. Instead, the amount of life lost when receiving damage changes, effectively varying the number of sustainable enemy hits.
□Refer to the "LIFE" setting of the "GAME ASSIGNMENTS" section in "Test Mode".□

Continue and Game Over

The option to "Continue" is available when the player's life runs out.
The START button can be used to continue the game, as long as there are credits remaining.
When using an IC Card, each "Continue" deducts from the number of remaining card uses.

Not continuing results in "Game Over".
When using an IC Card, game results are displayed following the game, showing experience increases, rank promotions, and so on.

GS Meter

The GS Meter measures the value of the player's special force performance.
For example, pulling off a special shot ("GOOD SHOT", "QUICK SHOT", etc.) or successfully completing an event raises the meter, while shooting fellow troops or hostages lowers the meter.
When the GS Meter reaches its maximum level, the current weapon receives an upgrade.
Building up the GS Meter also increases the amount of experience gained following a game.

Reload

When a magazine is empty, reloading is executed by simply aiming the gun controller outside of the screen.
At that time it is not necessary to press the trigger or any other buttons.
The time it takes between reloading and being able to shoot again varies between weapons.

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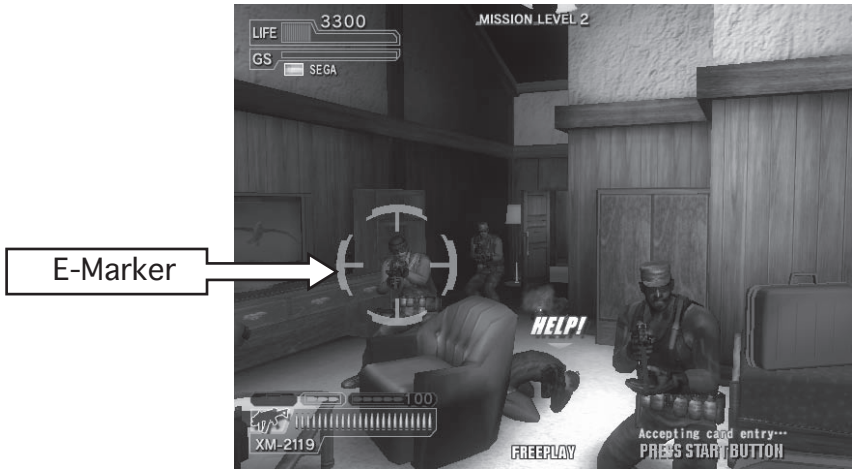
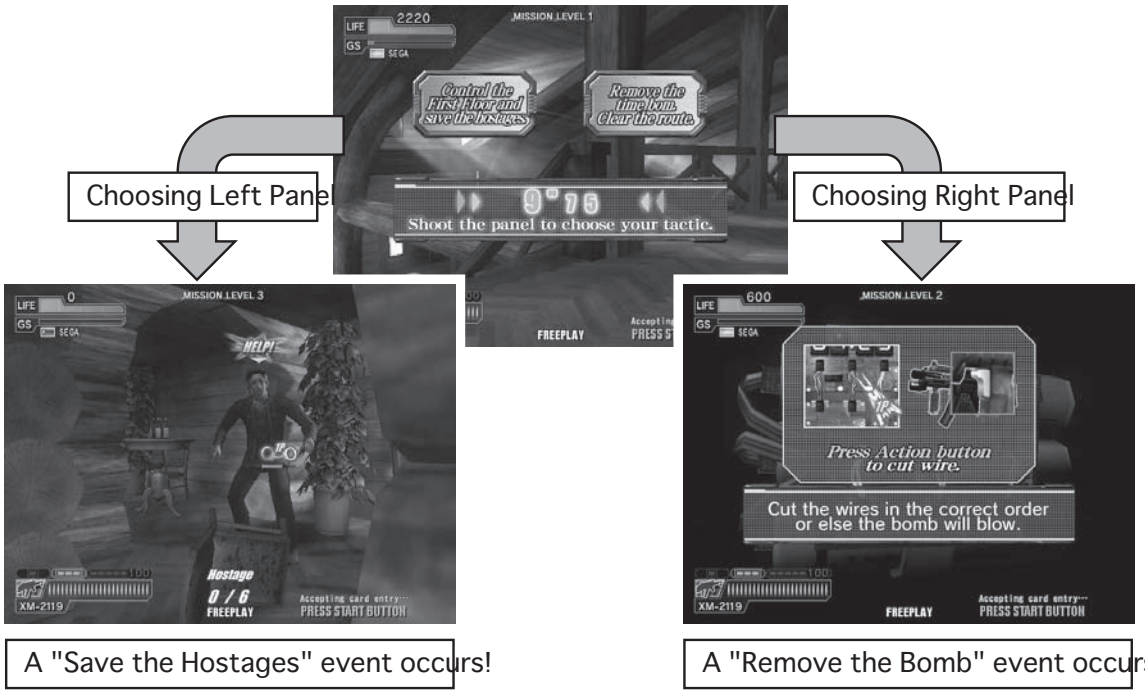
E-Marker

When discovered, the terrorists commence fire upon the player.
However, not all shots result in injury. An "E-Marker" will be displayed on any enemy whose shots will inflict damage, serving as a warning to the player.
When under fire from multiple enemies, first defeating enemies marked with an E-Marker should help the player avoid damage.



Tactic Selection

Proceeding through the game, "Tactic Selection" panels (as shown below) will appear.
The mission route will vary greatly depending on which panel is chosen.



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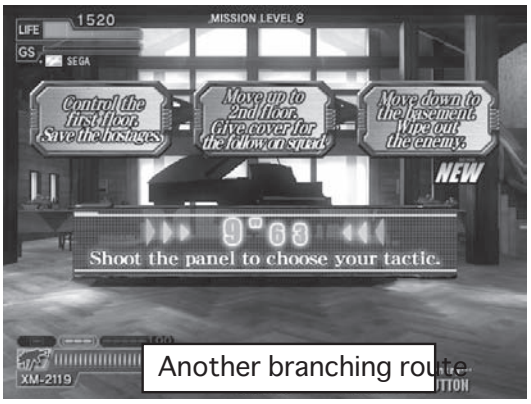
The number of selectable tactics will increase along with the Mission Level.
Also, a "NEW" label will be displayed on any newly appearing tactics panels.
[When no IC Card is being used, the number of Tactics Selection panels will not increase.]

Initially only one route

Mission level-up

Branching routes

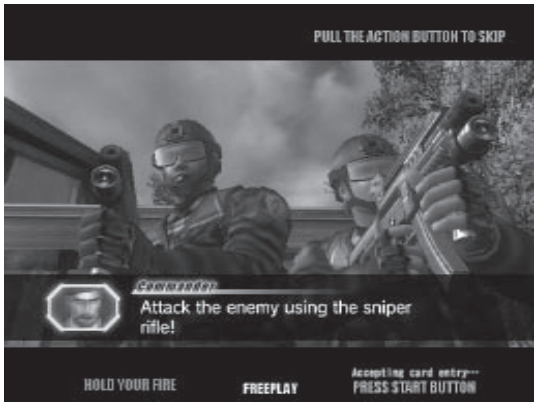
Mission level-up



Another branching route

Events (Special Operations)

Besides normal terrorist suppression, this game includes additional "events", such as bomb removal or securing hostages.
A certain number of events are initially open for play, but by using an IC Card and leveling-up missions, a large number of additional events become available.
Some events allow use of specialized weapons.
For example, when attacking the enemy from a distance in a Sniper event, the weapon temporarily changes to a sniper rifle.



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Auxiliary Items

Auxiliary items appear in certain situations during the game.
There are two types of auxiliary items—items that are put to use and disappear immediately after picking up, and those that are stocked and continue to be effective over time. The latter type can be used only one at a time.
Some auxiliary items can be taken advantage of only when combined with certain weapons.
For example, the "Compensator" is effective only when using weapons that produce a bullet spread effect.

The auxiliary items appearing in this game consist of the following 7 types.

First-Aid Kit : Restores 1 life unit.

Dot Sight : Displays the gun's sight reticule as an illuminated point.

Hi-cap Magazine : Doubles magazine capacity.

Compensator : Eliminates bullet spread effects.

Body Armor I : Halves the amount of damage taken for up to 2 hits.

Body Armor II : Halves the amount of damage taken for up to 4 hits.

Medal : Increases experience points acquired following the game.
[When no IC Card is being used, it boosts the GS Meter.]

Experience Points

Experience points are accumulated during game play when playing with an IC Card.
The amount of experience points accumulated during play are determined by score, GS Meter level, the number of medals, and game progress. These points are awarded to the player on the Game Results Screen following the game.
The player is leveled up after reaching a certain experience level. Depending on the level increase, players are rewarded with promotions and new weapons. Any new weapons can be used from the next play.
[When no IC Card is being used, there are no experience points.]

Rank and Promotion

Ranks serve as a comprehensive evaluation of the player's ability.
If certain conditions are met when leveling up, the player's rank increases by a level. This is referred to as "promotion".
Promotions open up new costumes and high-level, rare weapons that can be used from the next play.
[When no IC Card is being used, the rank insignia is decided by the player's score.]

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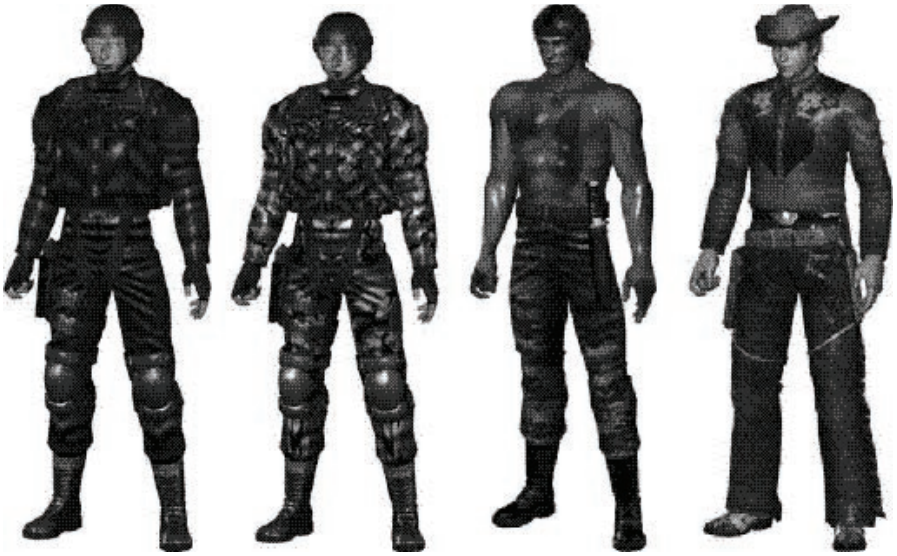
Costumes

This game has 14 different costumes.
Initially only 2 are available ("GHOST SQUAD" and "JUNGLE"), but that number increases with further play. The chosen costume can be viewed during in-game cut scenes.
Costumes have no direct effect on damage, score, or other game content.
[When no IC Card is being used, costumes are chosen from the 4 types shown below.]



GHOST SQUAD JUNGLE TOUGH GUY COWBOY

Weapons

As the player's level and rank go up, new weapons become available.
After a weapon has been acquired, it can be selected from the Customize Screen before starting a game. Once equipped, however, a weapon cannot be changed during play.

This game has 25 different types of weapons, each with varying characteristics and auxiliary weapon compatibility.
- Machinegun class : A typical weapon, capable of rapid-fire shooting.
- Shotgun class : Blasts covering a wide area, a single shot is capable of taking out multiple enemies.
- Handgun class : Requires a high learning curve, suitable for expert players.
- Rifle class : Capable of piercing walls and obstacles, can take out hidden enemies.
- Others : Weapons not fitting in any of the above categories.

[When no IC Card is being used, weapons are chosen from the 4 shown below before a game.]

"XM-2119" : A standard sub-machinegun. Can toggle between Semi-auto, 3-Shot Burst, and Full-auto firing modes to best match the situation. There is, however, an ammunition restriction on Full-auto fire.
"TK1B" : A powerful machinegun. It has high firepower and no Full-auto ammunition restriction. It is also has penetration power, making hidden enemies vulnerable to its fire. Its lack of accuracy from bullet spread is its main weakness, along with a long reload time.
"P44M" : This handgun has no rapid-fire ability, but proves reliable in targeting enemies. It is extremely powerful and capable of penetration.
"M4E" : A shotgun, capable of hitting multiple enemies with a single shot. Despite its power, the danger of hitting hostages or fellow troops with friendly fire warrants caution.

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Mid-game Entry

It is possible for an additional player to join later, even if a player is in the middle of play. If the necessary number of credits has been inserted, a message (as shown below) is displayed on the bottom part of the screen.

Pressing the START button at this point will commence entry without the use of an IC Card.
By first inserting a card before pressing the START button, play will commence using that IC Card.
In that case, the player will be equipped with the same weapon and costume used in the previous play.

Mid-game Termination

In a 2-player game, if only 1 player (using an IC Card) ends the game, that player's information (experience points, rank, high score, etc.) is updated even though the Game Results Screen is NOT displayed.
Details can be confirmed on the Player Data Screen before starting the next game.

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(6) IC CARDS [ONLY WITH THE IC CARD]

● Number of Uses

The number of uses per IC Card is 100.
This number includes expenditure for starting or continuing games.
An IC Card with 0 remaining uses cannot be used to start a game.

However, if the remaining uses reaches 0 during play, it is possible to continue a game. A game can be continued until either the player ends the game (decides not to continue after running out of life) or all missions have been completed.

● Updating (Data Transfer)

If an IC Card's remaining uses reaches 0, its data can be transferred to a new IC Card, allowing another 100 uses. This operation is referred to as "updating".
Updating is handled on the IC Card Insertion Screen when beginning a game.
Inserting the old card and a new, unused card together at the same time while this screen is displayed transfers saved data to the new card.
It is possible to update any card, regardless of the number of remaining uses.
However, even if the old card has remaining uses, the new, updated IC Card will always start with 100 remaining uses.

● Card Recovery

If the data stored on an IC Card happens to be damaged, it may be possible to restore that data using Card Recovery.
To enter Card Recovery, on the advertisement screen, press the TEST button while holding down the PLAYER 1 and PLAYER 2 START buttons at the same time.
In Card Recovery, use the PLAYER 2 START button to move between panels and the PLAYER 1 START button to select. Selecting the "Try to restore your card." panel begins automatic data restoration.

Be warned that Card Recovery is not always successful in restoring data.
If recovery fails, the error message, "This card cannot be initialized." is displayed.

Card Recovery

Failed recovery error message

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9. EXPLANATION OF TEST AND DATA DISPLAY

By operating the switch unit, periodically perform the tests and data check. When installing the machine initially or collecting cash, or when the machine does not function correctly, perform checking in accordance with the explanations given in this section.
The following shows tests and modes that should be utilized as applicable.
This product's basic system consists of the Chihiro game board and the GD-ROM drive. The system enables you to play several games one after the other just by changing a GD-ROM disc that is to be set on the GD-ROM drive.
The product supports, therefore, the following 2 test modes:
(1) System test mode for an automatic self-diagnostic test (generally used by every product that contains the basic system) and a coin assignment (specifically used by this product) and
(2) Game test mode for testing the input/output control devices and setting the difficulty level (specifically used by this product).

TABLE 9 EXPLANATION OF TEST MODE

ITEMS	DESCRIPTION	REFERENCE SECTIONS
INSTALLATION OF MACHINE	When the machine is installed, perform the following: 1. Check to ensure each is the standard setting at shipment. 2. Check each Input equipment in the INPUT TEST mode. 3. Check each Output equipment in the OUTPUT TEST mode. 4. Test on-IC-Board IC's in the self-test mode.	9-3C 9-3A 9-3B 9-2B, C
MEMORY TEST	This test is automatically executed by selecting MEDIA BOARD TEST or SYSTEM INFORMATION in the Menu mode.	9-2B, C
PERIODIC SERVICING	Periodically perform the following: 1. MEMORY TEST 2. Ascertain each setting. 3. To test each Input equipment in the INPUT TEST mode. 4. To test each Output equipment in the OUTPUT TEST mode.	9-2B, C 9-3C, D 9-3A 9-3B
CONTROL SYSTEM	1. To check each Input equipment in the INPUT TEST mode. 2. Adjust or replace each Input equipment. 3. If the problem still remains unsolved, check each equipment's mechanism movements.	9-3A 9-3D 10
MONITOR	In the Monitor Adjustment mode, check to see if Monitor (Projector) adjustments are appropriate.	9-2F 12
IC BOARD	MEMORY TEST	9-2B, C
DATA CHECK	Check such data as game play time and histogram to adjust the difficulty level, etc.	9-3G

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WARNING!

Never touch places other than those specified. Touching places not specified can cause electric shock and short circuit accidents.

STOP
IMPORTANT!

- Adjust the sound to the optimum volume, taking into consideration the environmental requirements of the installation location.
- Removing the Coin Meter circuitry renders the game inoperable.

SWITCH UNIT

Open the coin chute door, and the switch unit shown will appear.
The functioning of each SW is as follows:

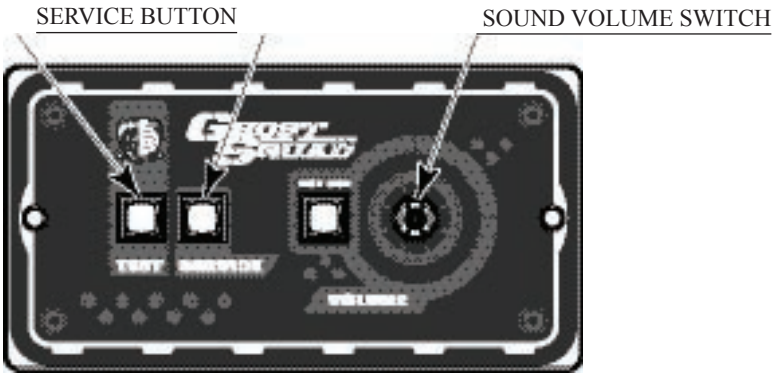

FIG. 9. 1 a SWITCH UNIT

- SOUND VOLUME SWITCH: (SOUND VOLUME) — Adjusts sound volume for all of the machines' Speakers.
- SERVICE BUTTON: (SERVICE) — Gives credits without registering on the coin meter.
- TEST BUTTON: (TEST) — For the handling of the test button, refer to the following pages.

COIN METER

Open the Cashbox Door by using the key to have the Coin Meter appear underneath the Cashbox.

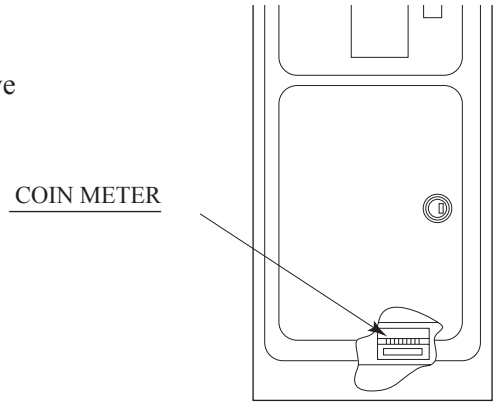

FIG. 9. 1 b

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STOP
IMPORTANT!

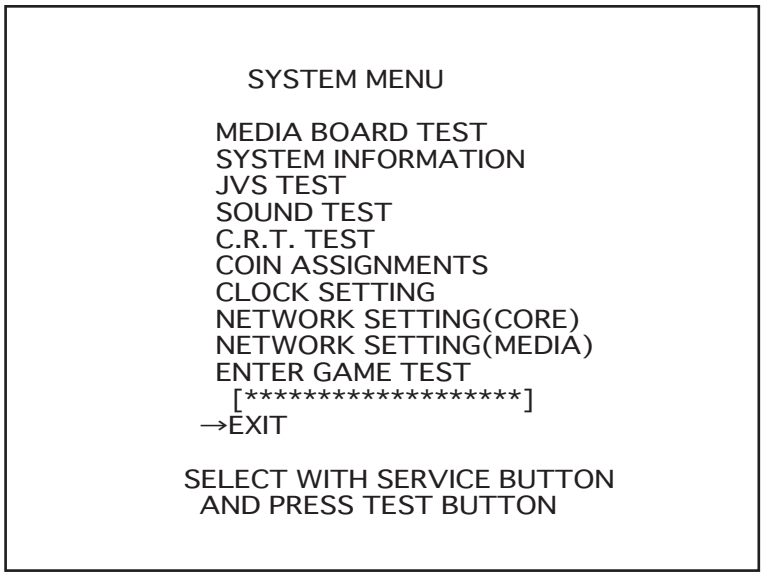
- Any settings that are changed by users during TEST MODE are saved upon exiting TEST MODE with the EXIT command in the SYSTEM MENU. If the unit is powered off prior to exiting, changes to settings will not take effect.
- You may not enter GAME TEST MODE while the unit is reading from or checking the GD-ROM. If error messages are displayed when exiting TEST MODE, you should power the unit off and on again.
- In the manual for this product, "Media Board" and "DIMM" are one and the same.
- Use with the specified settings. If settings other than those specified are used, inappropriate operations or malfunction may occur.

A. SYSTEM TEST MENU MODE

System Test Mode can be used to check that the main circuit operations are correct, adjust Monitor color, and perform coin/credit settings.
However, this product can only be used with the settings shown below.

- SOUND TEST
  - OUTPUT TYPE: STEREO
- COIN ASSIGNMENTS
  - COIN CHUTE TYPE: COMMON
  - SERVICE TYPE: COMMON

- Press the TEST Button after powering on the unit to display the following SYSTEM MENU.



- Press the SERVICE Button to move the cursor to the desired test item.
- Move the cursor to the desired item and press the TEST Button to display each test screen.
- Move the cursor to ENTER GAME TEST and press the TEST Button to enter the individual test menus for each game. Refer to "9-3 GAME TEST MODE".
- When testing is complete, move the cursor to EXIT and press the TEST Button. The game advertisement screen should be displayed.

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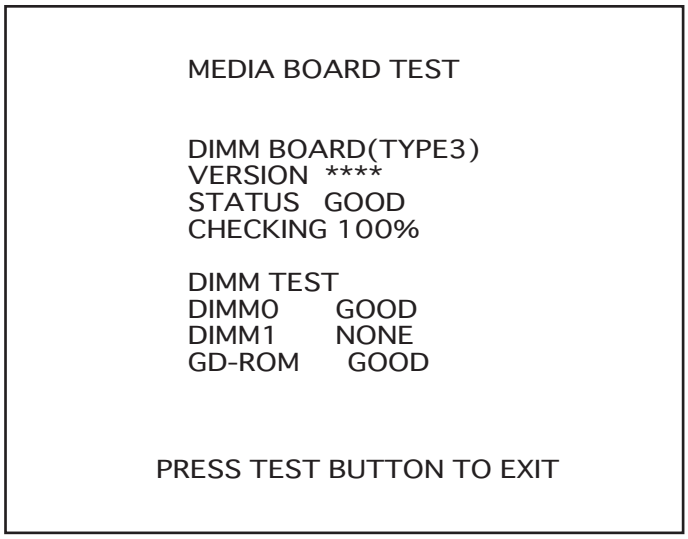
B. MEDIA BOARD TEST

STOP
IMPORTANT!

Powering off the system during the MEDIA BOARD TEST with a DIMM BOARD will erase the game programme data. It may be necessary to reload the data.
Always wait for the test to complete before attempting to exit.

MEDIA BOARD TEST is used to check the memory and IC on the MEDIA BOARD connected to the Chihiro. Test screens and test times may differ depending on the type of MEDIA BOARD connected to the unit.

1- The following is the MEDIA BOARD TEST screen for a unit with a DIMM BOARD.



2- MEDIA BOARD TEST begins immediately upon entering this test mode.

3- If "GOOD" is displayed to the right of each item, the MEDIA BOARD components are functioning properly.

4- After the test is complete, move the cursor to EXIT and press the TEST Button to return to the SYSTEM MENU screen.

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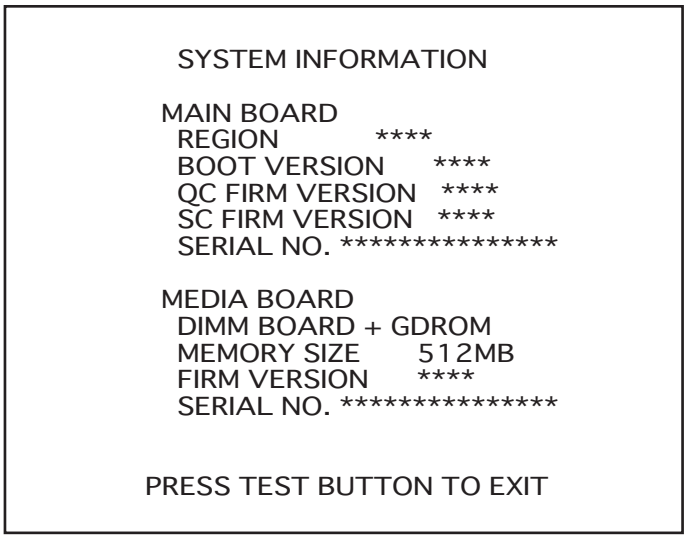
C. SYSTEM INFORMATION

Use SYSTEM INFORMATION to check version and other information for system programmes. Screens may differ depending on the type of MEDIA BOARD connected to the unit.

● The following is the SYSTEM INFORMATION screen for a unit with a DIMM BOARD.



Press the TEST Button to return to the SYSTEM MENU screen.

(A) REGION
The COUNTRY CODE of the MAIN BOARD.

(B) BOOT VERSION, QC FIRM VERSION, SC FIRM VERSION
Version information for the MAIN BOARD system programmes.

(C) SERIAL NO.
Serial number of the MAIN BOARD.

(D) DIMM BOARD + GDROM
Type of MEDIA BOARD. This example shows a DIMM BOARD with a GD-ROM DRIVE connected.

(E) MEMORY SIZE
Capacity of DIMM memory installed on the DIMM BOARD.

(F) FIRM VERSION
Version information for the DIMM BOARD system programme.

(G) SERIAL NO.
Serial number of the DIMM BOARD.

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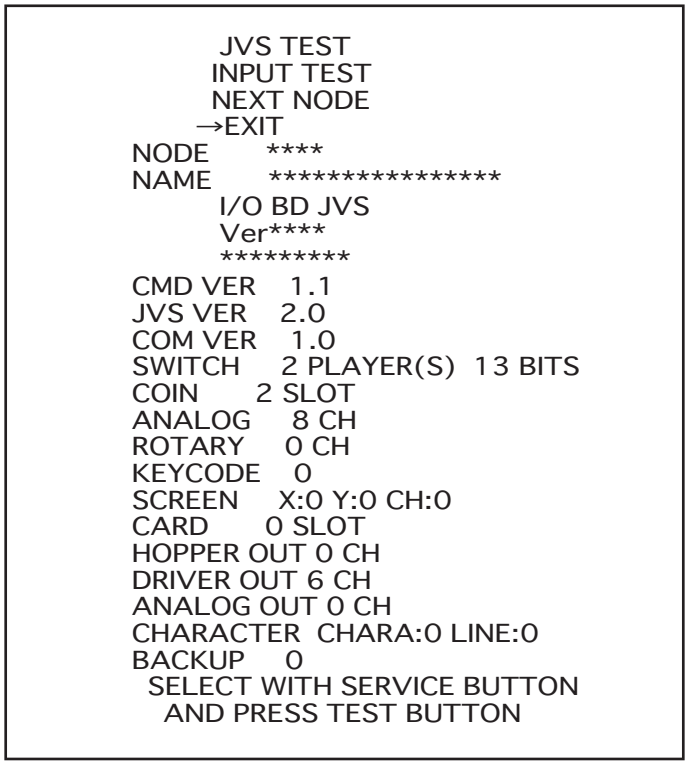
D. JVS TEST

JVS TEST is used to verify the specs of the I/O BOARD connected to the Chihiro and to run input tests. I/O BOARD specs are displayed initially.
Screens may differ depending on the type of I/O BOARD connected to the unit.



- Use the SERVICE Button to move the cursor to the desired test item.
- Move the cursor to INPUT TEST and press the TEST Button to enter the INPUT TEST screen for the I/O BOARD currently displayed.
- When 2 or more I/O BOARDS are connected, move the cursor to NEXT NODE and press the TEST Button to enter the test screen for the next I/O BOARD. The lower the NODE number, the further away the node is from the Chihiro.
- Move the cursor to EXIT and press the TEST Button to return to the SYSTEM MENU screen.

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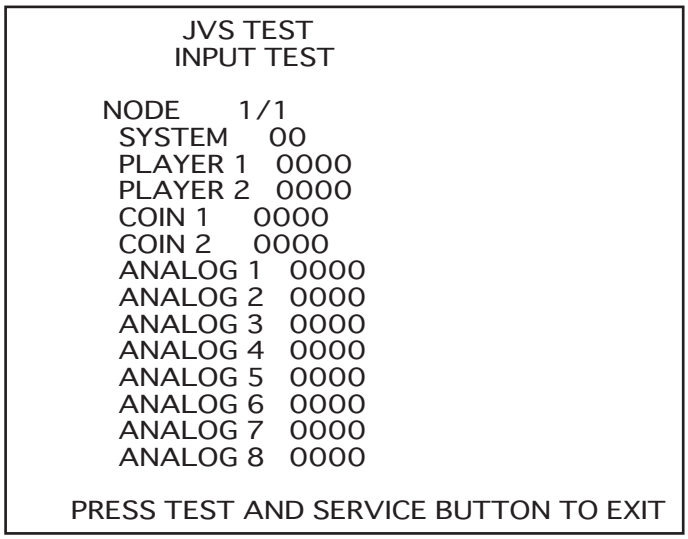
INPUT TEST Screen



- On-screen values change according to the input from switches and the volume.

  (A) SYSTEM, PLAYER
  Values change with input from control panel/other switches.

  (B) COIN
  Increases with input from the COIN SWITCH. The count is cleared when exiting TEST MODE.

  (C) ANALOG
  Displays analog values from "0000" to "FFFF".

- Press the SERVICE and TEST Buttons simultaneously to return to the JVS TEST main screen.

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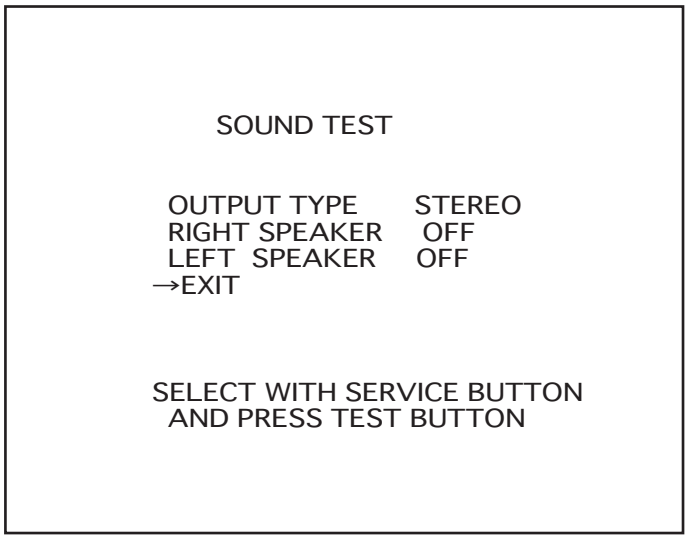
E. SOUND TEST

Use SOUND TEST to test sound output and to select the stereo/mono/surround setting.



- Use the SERVICE Button to move the cursor to the desired test item.
- Press the TEST Button to enter the selected item.

  (A) OUTPUT TYPE(STEREO, MONO, SURROUND)
  Select the sound output from the I/O PANEL audio output interface setting among STEREO, MONO and SURROUND.

  (B) RIGHT/LEFT SPEAKER(ON, OFF)
  When set to "ON", the test sends a beep to each audio output interface. Only the word "SPEAKER" is displayed when the OUTPUT TYPE is set to "MONO", and when set to "ON", the test sends the same beep to both the left/right audio output interfaces.
  To test surround output, it is necessary to use a separate Audio Amp, and receive signal from a terminal not in use at the time of shipping.
  Note: Not available with this product.

- Move the cursor to EXIT and press the TEST Button to return to the SYSTEM MENU screen.

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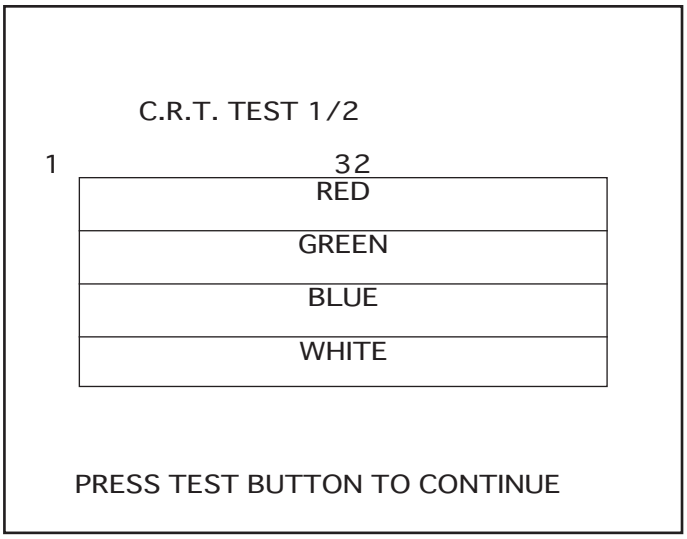
F. C.R.T. TEST

Use the C.R.T. TEST to adjust monitor colours and verify screen size.

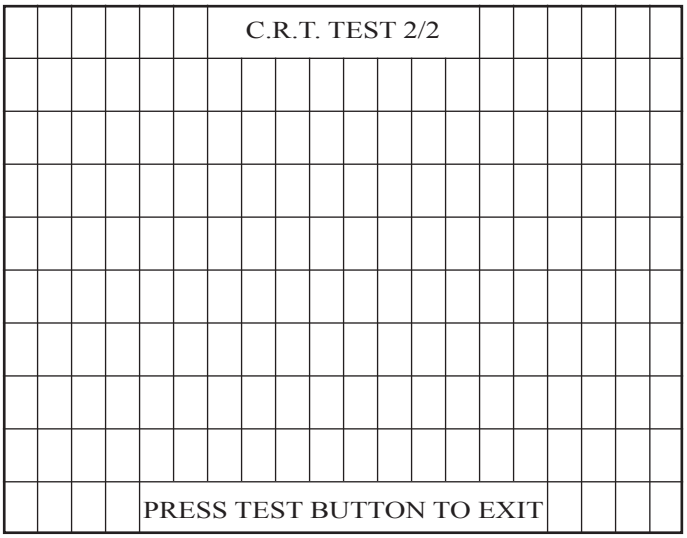
COLOUR CHECK Screen

- Monitor COLOUR CHECK screen is displayed initially.
  Each of the colours (red, green and blue) is darkest at the far left and gets progressively lighter (32 steps) towards the right.
  Monitor brightness is set correctly if the white colour bar is black at the left edge and white at the right edge.



- Press the TEST Button to proceed to the next page.

SIZE CHECK Screen



- Adjust the CHECK GRID so that the entire GRID is displayed on the screen.
- Press the TEST Button to return to the SYSTEM MENU screen.

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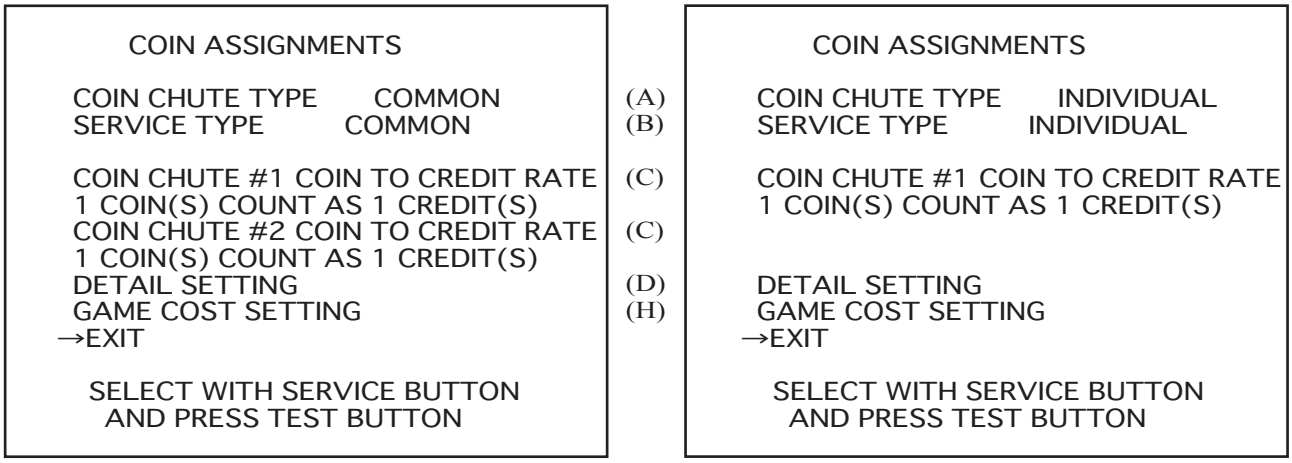
G. COIN ASSIGNMENTS

Use COIN ASSIGNMENTS to set the credit rate for each coin inserted.

- Use the SERVICE Button to move the cursor to the desired test item.
- Press the TEST Button to change the setting or to open the detailed settings.
- Move the cursor to EXIT and press the TEST Button to return to the SYSTEM MENU screen.



COIN CHUTE TYPE…COMMON

COIN CHUTE TYPE…INDIVIDUAL

(A) COIN CHUTE TYPE(COMMON, INDIVIDUAL)
Adjust settings according to the specs of the cabinet COIN CHUTE.

COMMON
This is for cabinets where a single COIN CHUTE is used by multiple players.
Coins inserted by each player are treated as common credits.
Up to 2 COIN CHUTES (#1 and #2) may be used. The (C) COIN TO CREDIT RATE setting for COIN CHUTE #1 and #2 may be set differently.

INDIVIDUAL
This is for cabinets with individual COIN CHUTES for each player.
Coins inserted by each player are treated as individual player credits.
The (C) COIN TO CREDIT RATE setting is used by all COIN CHUTES.

(B) SERVICE TYPE(COMMON, INDIVIDUAL)
Use this to set the function of each SERVICE Button when there is more than one SERVICE Button.

COMMON
Pressing any SERVICE Button enters service credits for all players.

INDIVIDUAL
Pressing the SERVICE Button enters service credits only for the corresponding player.

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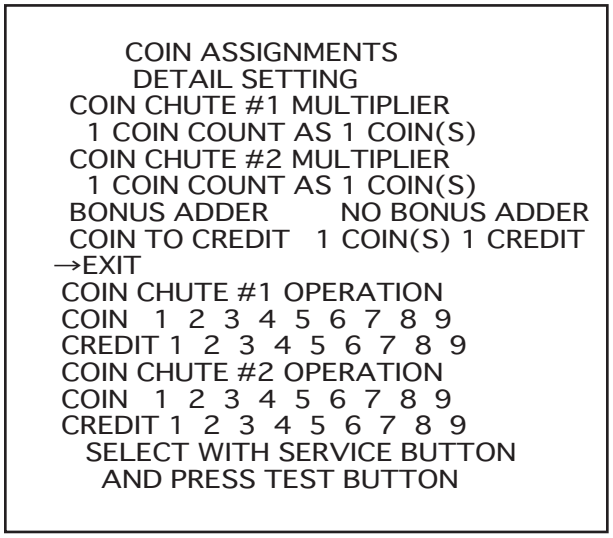
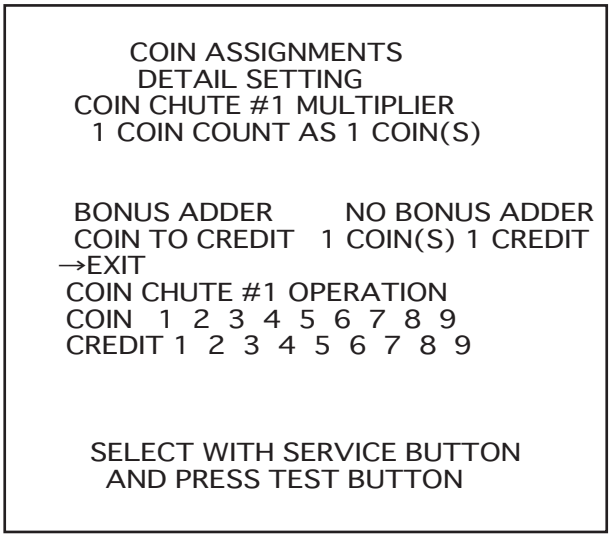
(C) COIN TO CREDIT RATE
Set the CREDIT RATE for each coin inserted.
The "x COIN(S) COUNT AS y CREDIT(S)" setting indicates that "Inserting x coins equals y credits".
Set this to "FREE PLAY" to allow game play without credits.
When (A) COIN CHUTE TYPE is set to "COMMON", COIN CHUTE #2 settings are restricted to some extent by the settings for COIN CHUTE #1.

(D) DETAIL SETTING
This mode allows for more detailed credit rate settings than the (C) COIN TO CREDIT RATE setting.
Changes made in DETAIL SETTING override any (C) COIN TO CREDIT RATE settings.

DETAIL SETTING Screen



COIN CHUTE TYPE…COMMON



COIN CHUTE TYPE…INDIVIDUAL

(E) COIN CHUTE MULTIPLIER
Use this to set how many coins will be counted for each coin inserted.
The "1 COIN COUNT AS x COIN(S)" setting indicates that "Each coin will be counted as x coins".
When the (A) COIN CHUTE TYPE is set to "COMMON", the setting may be set individually for COIN CHUTE #1 and #2.

(F) BONUS ADDER
Use this to set the number of coins calculated with the (E) COIN CHUTE MULTIPLIER setting that need to be inserted to get 1 bonus coin. When the (A) COIN CHUTE TYPE is set to "COMMON", the sum of the coins for COIN CHUTE #1 and #2 is used for the calculation.
The "x COINS GIVE 1 EXTRA COIN" setting indicates that "For every x coins, 1 bonus coin is given".
Set this to "NO BONUS ADDER" to disable bonus coins entirely.

(G) COIN TO CREDIT
Use this to set how many coins calculated with the (F) BONUS ADDER setting count as 1 credit.
The "x COIN(S) 1 CREDIT" setting indicates that "Every x coins equals 1 credit."

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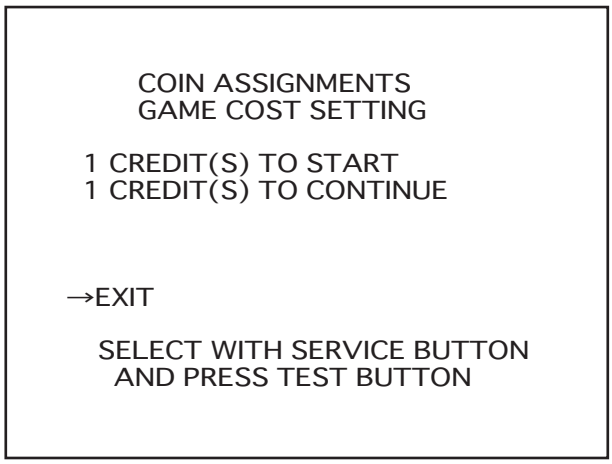
(H) GAME COST SETTING

Use this mode to set the number of credits required to start a game.
Screens may differ depending on the game.



(I) Set the number of credits required to start a game.

(J) Set the number of credits required to continue a game.

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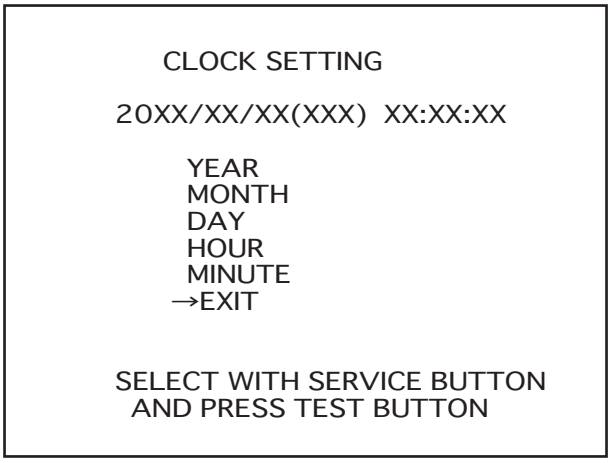
H. CLOCK SETTING

Use CLOCK SETTING to set the Chihiro internal clock.



- Use the SERVICE Button to move the cursor to the item to be set.
- Move the cursor to the desired item and press the TEST Button to increase values.
  The max value for YEAR is "2099"; further increases return the value to "2000".
- Move the cursor to EXIT and press the TEST Button to return to the SYSTEM MENU screen.

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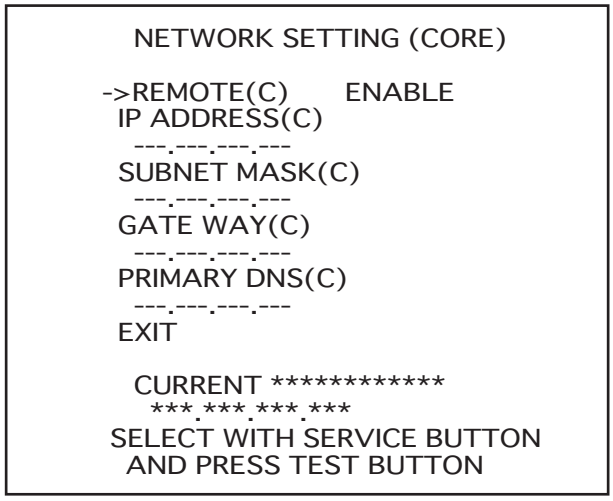
I. NETWORK SETTING (CORE)

Use the LAN PORT attached to the Main Board, and carry out the settings necessary for network communication.
Note: This function is not available with this product.



- Use the SERVICE Button to move the cursor to the desired test item.
  (When setting IP ADDRESS, SUBNET MASK, GAME WAY or PRIMARY DNS, use the underline as a guide.)
- Press the TEST Button to change the setting.
- Move the cursor to EXIT and press the TEST Button to return to the SYSTEM MENU screen.

(A) REMOTE (C)
This sets up whether a communication setting is automatic or manual.
ENABLE: Sets the communication setting automatically.
DISABLLE: Sets the communication setting manually.

(B) IP ADDRESS (C)
This is one of the settings required for communication network. After setting the number, press TEST Button on SET position to memorize the setting. If you set the REMOTE setting to ENABLE, you cannot select this.

(C) SUBNET MASK (C)
This is one of the settings required for communication network. After setting the number, press TEST Button on SET position to memorize the setting. If you set the REMOTE setting to ENABLE, you cannot select this.

(D) GATE WAY (C)
This is one of the settings required for communication network. After setting the number, press TEST Button on SET position to memorize the setting. If you set the REMOTE setting to ENABLE, you cannot select this.

(E) PRIMARY DNS (C)
This is one of the settings required for communication network. After setting the number, press TEST Button on SET position to memorize the setting. If you set the REMOTE setting to ENABLE, you cannot select this.

(F) CURRENT
This displays the present setting value during a setup of each item [(B), (C), (D), (E)]. Pressing TEST Button on SET position, the settings are memorized and the screen is changed.

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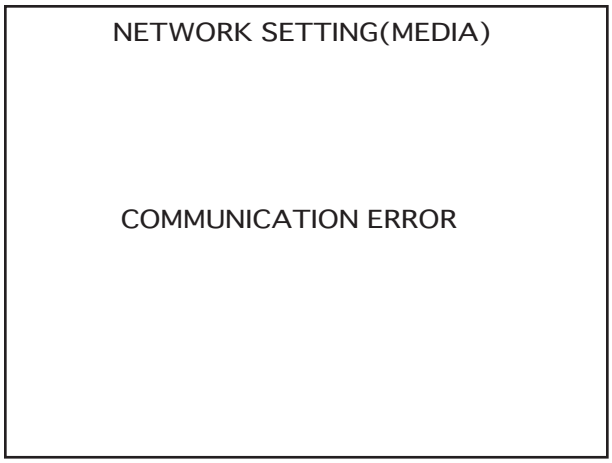
J. NETWORK SETTING (MEDIA)

Use NETWORK SETTING to establish and test network connections.
This is only displayed the following error message screen.

- This game does not support network communication connections.



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STOP
IMPORTANT!

When changing the game configuration, changes will not take effect until the Game Test Mode has been completed. Be sure to exit the Game Test Mode properly after configuration changes.

Select ENTER GAME TEST from the System Menu screen to display the Game Test Menu screen as follows.
Use the SERVICE Button to move the cursor to the desired test item.
Press the TEST Button to enter the selected item's test.

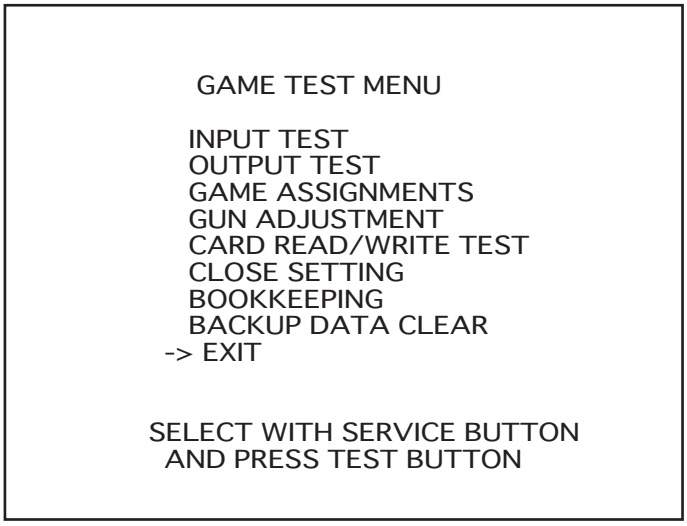

FIG. 9. 3 GAME TEST MENUscreen

Performs tests, adjustments and settings for each of the Game Test Menu screen items below.

A. INPUT TEST	:	Tests each input device used in the game.
B. OUTPUT TEST	:	Tests each output device used in the game.
C. GAME ASSIGNMENTS	:	Adjusts game settings.
D. GUN ADJUSTMENT	:	Performs sight settings for the game's Control Unit (Gun).
E. CARD READ/WRITE TEST	:	Tests the reading and writing of IC Cards.
F. CLOSE SETTING	:	Sets store closing time.
G. BOOKKEEPING	:	View all recorded game data.
H. BACKUP DATA CLEAR	:	Erase all game records.

After selecting an item, read the explanations below regarding operation.

After performing tests and adjustments, return to the Game Test Menu screen, select EXIT and press the TEST Button.

You will return to the System Menu screen. Move the cursor to EXIT on the System Menu screen and press the TEST Button to return to the Game Play screen.

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A. INPUT TEST

Select INPUT TEST to display the following screen and check the status of input devices.
This test should be used periodically to check that each input device is functioning correctly.

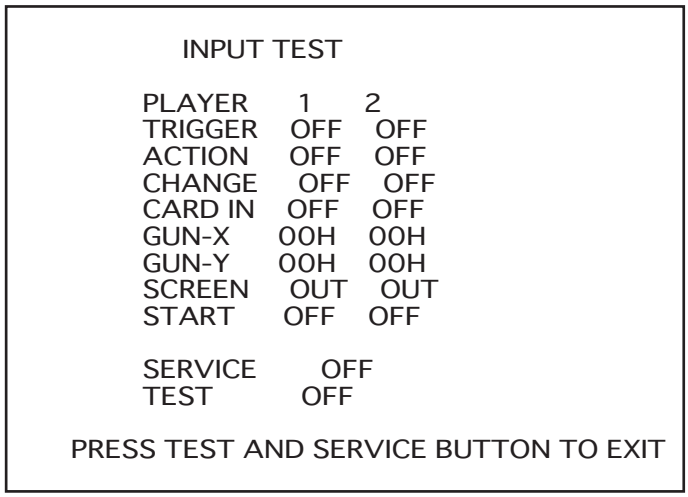

FIG. 9. 3 a INPUT TEST screen

The items refer to the following input devices.

- TRIGGER : The controller's TRIGGER switch.
- ACTION : The controller's ACTION button.
- CHANGE : The controller's SHOT SELECTOR button.
- CARD IN : Whether an IC card is inserted into the slot or not.
- GUN-X : The current X-coordinate of the controller's target location. (range: 00-FF)
- GUN-Y : The current Y-coordinate of the controller's target location. (range: 00-FF)
- SCREEN : If the controller is facing the screen, this will be IN, otherwise it is OUT.
- START : The START button.
- SERVICE : The SERVICE button.
- TEST : The TEST button.

Input is normal if the display to the right of each item changes from OFF to ON when each input device is operated.

Input is normal if the display to the right of SCREEN changes from OUT to IN and GUN-X and GUN-Y show values between 00 and FF when the controller is pointed at the screen.

Press the SERVICE and TEST Buttons simultaneously to return to the Game Test Menu Screen.

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B. OUTPUT TEST

Select OUTPUT TEST to display the following screen and check the status of each lamp. This test should be used periodically to check that the lamps are functioning correctly.

Press the SERVICE Button to move the cursor and the TEST Button to select. Displays ON when selected.

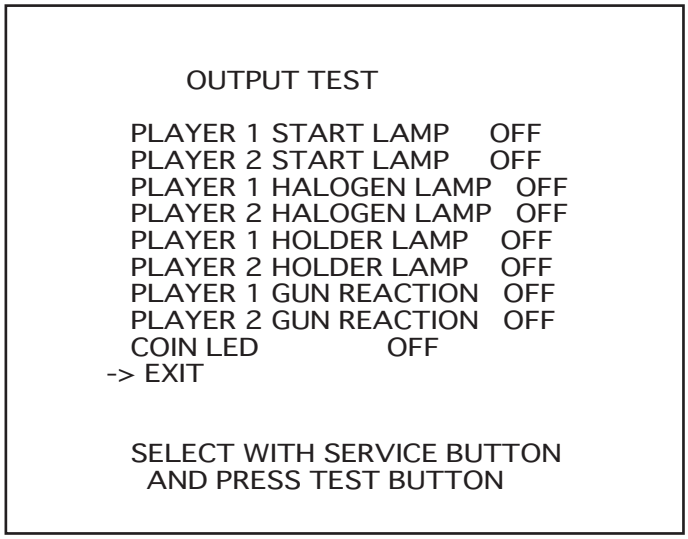

FIG. 9. 3 b OUTPUT TEST screen

- PLAYER 1 START LAMP : Lights up the 1P START button.
- PLAYER 2 START LAMP : Lights up the 2P START button.
- PLAYER 1 HALOGEN LAMP : Lights up the 1P halogen lamp.
- PLAYER 2 HALOGEN LAMP : Lights up the 2P halogen lamp.
- PLAYER 1 HOLDER LAMP : Lights up the 1P holder lamp.
- PLAYER 2 HOLDER LAMP : Lights up the 2P holder lamp.
- PLAYER 1 GUN REACTION : Vibrates the 1P gun.
- PLAYER 2 GUN REACTION : Vibrates the 2P gun.
- COIN LED : Lights up the coin slot LED.
- EXIT : Returns to the Game Test Menu.

Move the cursor to EXIT and press the TEST Button to return to the Game Test Menu Screen.

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C. GAME ASSIGNMENTS

Select GAME ASSIGNMENTS to display the current game settings and make changes.

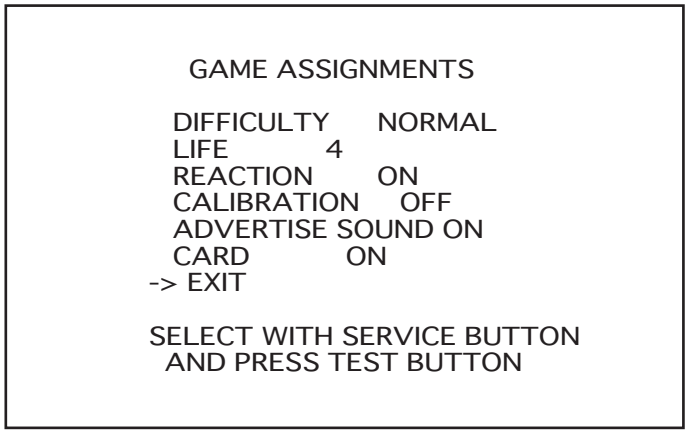

FIG. 9. 3 c GAME ASSIGNMENTS screen

Perform the following settings for each item.

● DIFFICULTY : Choose the difficulty level of the game from EASY, NORMAL and HARD. The product is shipped with the default set at NORMAL.

● LIFE : Choose the amount of life given for players starting a new game between 1 and 7. If the amount of damage sustained in the game equals this number, the game will be over. (Default: 4)

Note that these settings will not affect the appearance of the life gauge to the player. (refer to the "Life" section in "GAME RULES AND GAMEPLAY" for more information)

● REACTION :Turn the gun controller vibration ON and OFF. (Default: ON)

● CALIBRATION :Turn the initial gun controller calibration screen ON and OFF. (Default: OFF)

● ADVERTISE SOUND :Turn sounds ON and OFF during the demo screen. (Default: ON)

● CARD :Choose whether or not to use IC Cards.
(In the U.S.A., the default is OFF, but elsewhere it is ON)

● EXIT :Confirm the setting changes and return to the Game Test Menu.

Changes to settings are not enabled until Test Mode is exited. After changing settings, be sure to exit Test Mode.

After changing the settings, select EXIT and press the TEST Button to return to the Game Test Menu Screen.

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D. GUN ADJUSTMENT

Select GUN ADJUSTMENT to display the following screen.
This screen allows you to adjust the gun using the five calibration targets (TOP, LEFT, CENTER, RIGHT, BOTTOM). Use each target to calibrate as follows.

Use the standard gun controller, carefully aim at the correct target and pull the trigger to calibrate the value. Select between the calibration targets with the 1P and 2P START buttons or SERVICE button.

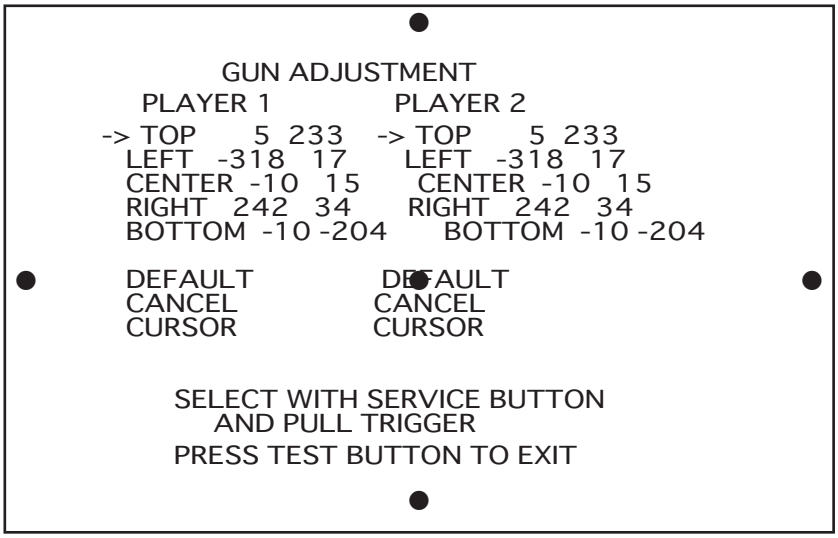

FIG. 9. 3 d GUN ADJUSTMENT screen

Details for each item are as follows.

● TOP x y: Set the TOP value.
The number on the left (x) is the horizontal component, and the number on the right (y) is the vertical component. Aim the controller at the TOP target (circle) and pull the trigger to set the value. This will not affect horizontal calibration.

● LEFT x y: Set the LEFT value.
The number on the left (x) is the horizontal component, and the number on the right (y) is the vertical component. Aim the controller at the LEFT target and pull the trigger to set the value. This will not affect vertical calibration.

● CENTER x y: Set the CENTER value.
The number on the left (x) is the horizontal component, and the number on the right (y) is the vertical component. Aim the controller at the CENTER target and pull the trigger to set the CENTER value.

● RIGHT x y: Set the RIGHT value.
The number on the left (x) is the horizontal component, and the number on the right (y) is the vertical component. Aim the controller at the RIGHT target and pull the trigger to set the RIGHT value. This will not affect vertical calibration.

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Details for each item are as follows.

- TOP x y: Set the TOP value.
  The number on the left (x) is the horizontal component, and the number on the right (y) is the vertical component. Aim the controller at the TOP target (circle) and pull the trigger to set the value. This will not affect horizontal calibration.

- LEFT x y: Set the LEFT value.
  The number on the left (x) is the horizontal component, and the number on the right (y) is the vertical component. Aim the controller at the LEFT target and pull the trigger to set the value. This will not affect vertical calibration.

- CENTER x y: Set the CENTER value.
  The number on the left (x) is the horizontal component, and the number on the right (y) is the vertical component. Aim the controller at the CENTER target and pull the trigger to set the CENTER value.

- RIGHT x y: Set the RIGHT value.
  The number on the left (x) is the horizontal component, and the number on the right (y) is the vertical component. Aim the controller at the RIGHT target and pull the trigger to set the RIGHT value. This will not affect vertical calibration.

- BOTTOM x y: Set the BOTTOM value.
  The number on the left (x) is the horizontal component, and the number on the right (y) is the vertical component. Aim the controller at the BOTTOM target and pull the trigger to set the value. This will not affect horizontal calibration.

- DEFAULT: Restore calibration values to original settings.

- CANCEL: Restore calibration values to previous settings.

- CURSOR: Select CURSOR and aim the controller at the screen to display a round cursor (blue for 1P, red for 2P) where the controller hits the screen. Use this cursor to check calibration.

- OUT OF SCREEN: Displays "OUT OF SCREEN" when the controller is pointed outside the screen. Values cannot be set when the controller is out of screen.

Changes to settings are not enabled until the Test Mode is exited. After changing settings, be sure to exit Test Mode.

After changing the settings, select EXIT and press the TEST Button to return to the Game Test Menu Screen.

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E. CARD READ/WRITE TEST

Select CARD READ/WRITE TEST to display the following screen with testing options for the reading and writing of IC Cards. Use this screen regularly to test the functionality of the machine.

First, insert an IC Card into the slot, then press the SERVICE button to choose the item for testing. When the cursor is on the desired item, press the TEST Button.
If reading/writing was carried out successfully, "OK" will be displayed on the screen.

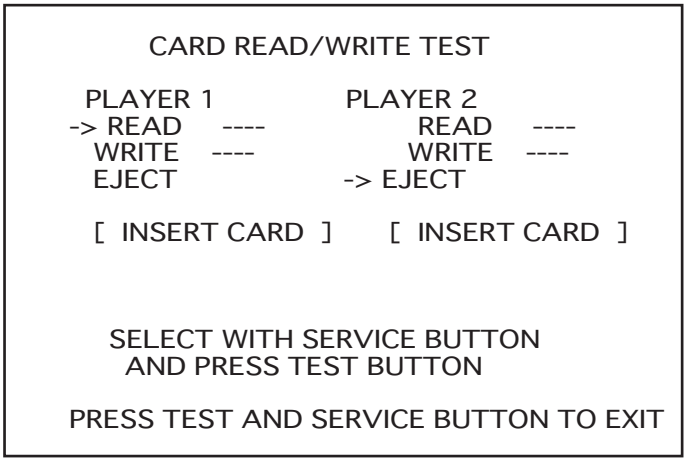

FIG. 9. 3 e CARD READ/WRITE TEST screen

- READ : Perform a read test on the inserted IC Card.
- WRITE : Perform a write test on the inserted IC Card.
- EJECT : Eject the IC Card.

Press the SERVICE and TEST Buttons simultaneously to return to the Game Test Menu Screen.

** Your unit may or may not have a card unit.

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F. CLOSE SETTING

Select CLOSE SETTING to display the following screen with a list of store closing time settings. When only 30 minutes is left until the set closing time, it will no longer be possible to use an IC Card to start the game.

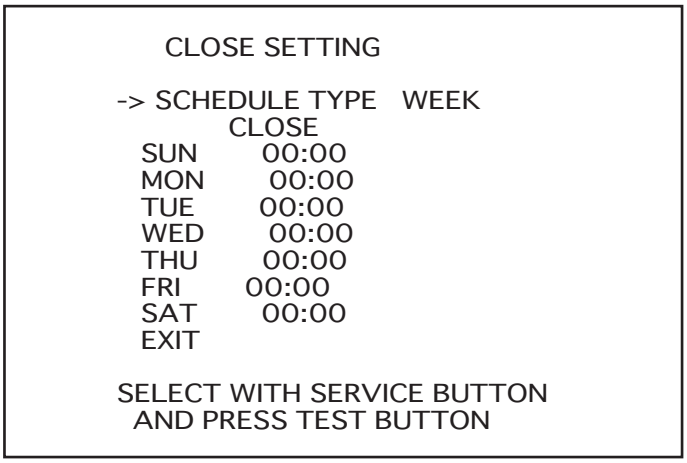

FIG. 9. 3 f CLOSE SETTING screen

- SCHEDULE TYPE : Choose between OFF(no closing time settings), EVERYDAY (same closing time everyday) and WEEK (same closing times every week) (Default: OFF)
- EVERYDAY : The time the store closes everyday.
- SUN : The time the store closes on Sundays.
- MON : The time the store closes on Mondays.
- TUE : The time the store closes on Tuesdays.
- WED : The time the store closes on Wednesdays.
- THU : The time the store closes on Thursdays.
- FRI : The time the store closes on Fridays.
- SAT : The time the store closes on Saturdays.
- EXIT : leturns to the Game Test Menu.

Move the cursor to EXIT and press the TEST Button to return to the Game Test Menu Screen.

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G. BOOKKEEPING

Select BOOKKEEPING on the Game Test Menu screen to display the three screens of operating status data.
Press the TEST Button on the BOOKKEEPING 1/3 and BOOKKEEPING 2/3 screens to move to the second and third (BOOKKEEPING 3/3) screens. Press the TEST Button in the third screen to return to the Game Test Menu Screen.

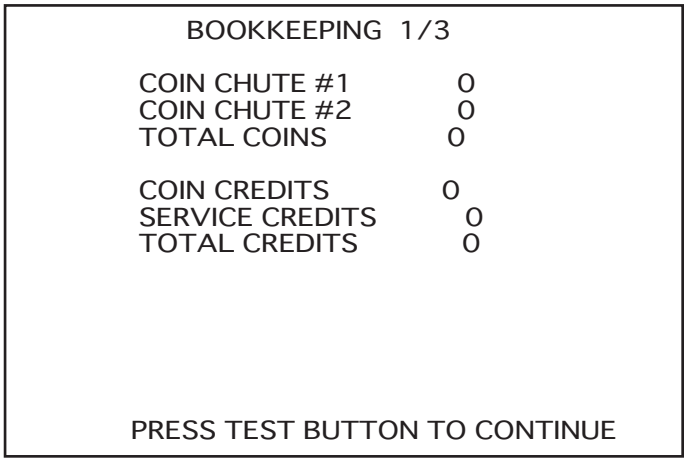

FIG. 9. 3 g a BOOKKEEPING 1/3 screen

The display items for the screen (Page 1 of 3) are as follows.

- COIN CHUTE #1 : The number of coins inserted into Coin Slot 1.
- COIN CHUTE #2 : The number of coins inserted into Coin Slot 2.
- TOTAL COINS : The total number of coins inserted into the coin slots.
- COIN CREDITS : The number of credits for the coins inserted.
- SERVICE CREDITS : The number of credits input by the SERVICE Button.
- TOTAL CREDITS : Total credits from coins and the SERVICE Button

Press the TEST Button to display the next screen.

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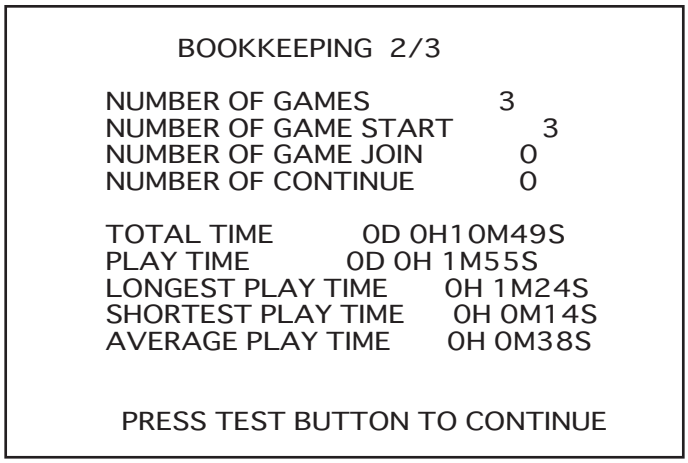

FIG. 9. 3 g b BOOKKEEPING 2/3 screen

The display items for the screen (Page 2 of 3) are as follows.

- NUMBER OF GAMES : The total number of games played.
- NUMBER OF GAME START : Number of games started.
- NUMBER OF GAME JOIN : Number of times game has been joined in-progress.
- NUMBER OF CONTINUE : Number of times game has been continued.
- TOTAL TIME : The amount of time the unit has been in operation.
- PLAY TIME : The sum of 1P's time played and 2P's time played.
- LONGEST PLAY TIME : The longest play time for one game.
- SHORTEST PLAY TIME : The shortest play time for one game.
- AVERAGE PLAY TIME : The average amount of time played per game.

Press the TEST Button to display the next screen (Page 3 of 3).

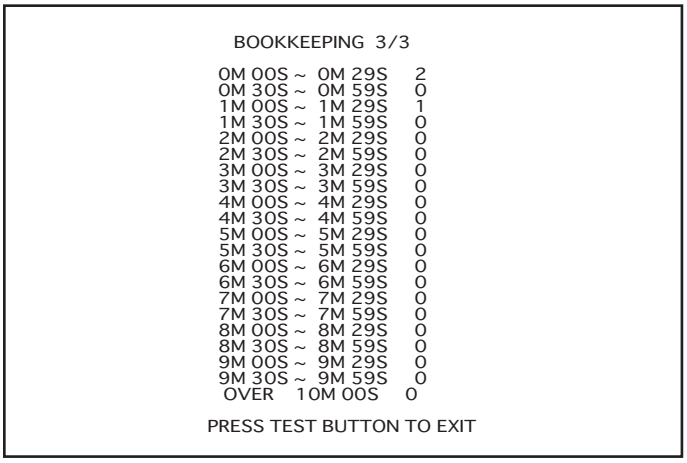

FIG. 9. 3 g c BOOKKEEPING 3/3 screen

PLAY TIME HISTOGRAM shows the number of plays and the respective play times. This histogram should be referred to when setting the Game Difficulty.

This displays play times on a scale from 0M00S to 9M59S with 30-second intervals.
All play times over ten minutes are included in the item OVER 10M00S.

Press the TEST Button after viewing. You will return to the Game Test Menu Screen.

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H. BACKUP DATA CLEAR

Select BACKUP DETA CLEAR to clear the contents of BOOKKEEPING, ranking data and coin/credit data.

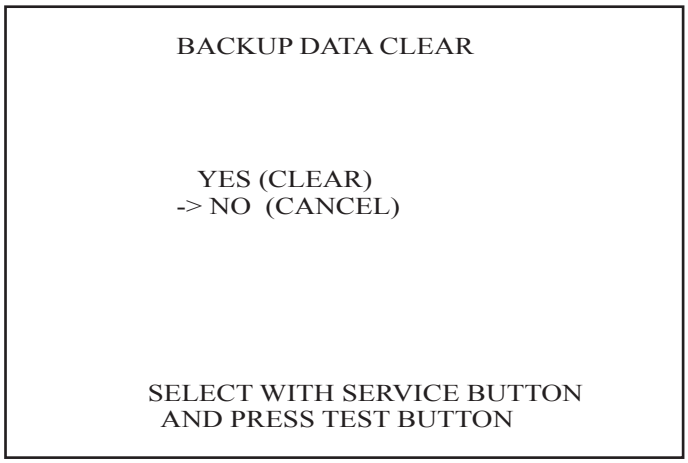

FIG. 9. 3 h BACKUP DATA CLEAR screen

To clear data, use the SERVICE Button to move the cursor to YES (CLEAR) and then press the TEST Button. When the data has been cleared, the message "COMPLETED" will be displayed.

Press the TEST Button again to return to the Game Test Menu screen.

Move the cursor to NO (CANCEL) and press the TEST Button to return to the Game Test Menu Screen without clearing the data.

Note that this operation does not affect GAME ASSIGNMENTS or GUN ADJUSTMENT settings.

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10. CONTROL UNIT (GUN CONTROLLER)

WARNING!

- In order to prevent any electric shocks or short circuits, be sure to turn the power off before performing any work that involves touching the interior parts of the product.
- Be careful not to damage the wires. Damaged wires may cause electric shocks or short circuits, or present a risk of fire.
- Be very careful when soldering. Handling a soldering iron carelessly may result in a fire or a burn.

CAUTION!

- When securing the plastic-made parts, do not excessively fasten screws and nuts. Failure to do this may damage the parts, and fragments resulting from damage may cause injury.
- When reassembling the Gun Controller, be sure to check the connecting portion and the trigger, etc. If the reassembly work is insufficient and/or incorrect, fingers may be caught and result in injury.
- The solenoid on the Control Unit (Gun Controller) may become hot. Take care as there is a risk of accidental burns.

STOP
IMPORTANT!

- Do not cut the tie belt securing the wires in the Control Unit (Gun Controller). Cutting the tie belt may cause malfunctioning of the wire connection. If you cut the tie belt when replacing the wire etc., be sure to secure the wires using a new tie belt as before.
- Follow these directions carefully to avoid damaging or losing small parts.

In cases where the gun's operation is unsatisfactory or the gun sight deviates from the direction in which the control unit is pointed, the gun's interior parts may have been damaged. Replace the parts by disassembling the gun with the procedure described below. Also, be sure to perform a sighting check in the test mode when the gun parts are replaced.

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REPLACING THE MICROSWITCH

To replace the Gun Controller's internal components, first separate the left shell (Cover L) and right shell (Cover R). The controller's internal components are mounted on the right shell, so work with the gun lying on its right side. To replace the Shot Selector button microswitch, first remove the Shot Selector button from the right shell.

- Turn power off.
- Remove the 15 screws to separate the two shells.

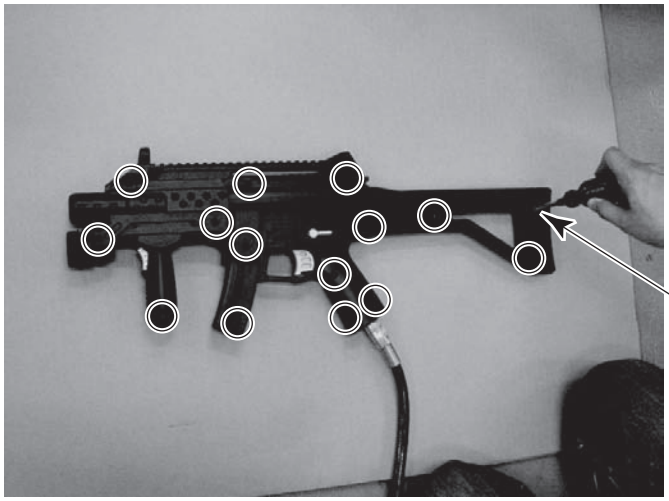

PHOTO 10 a

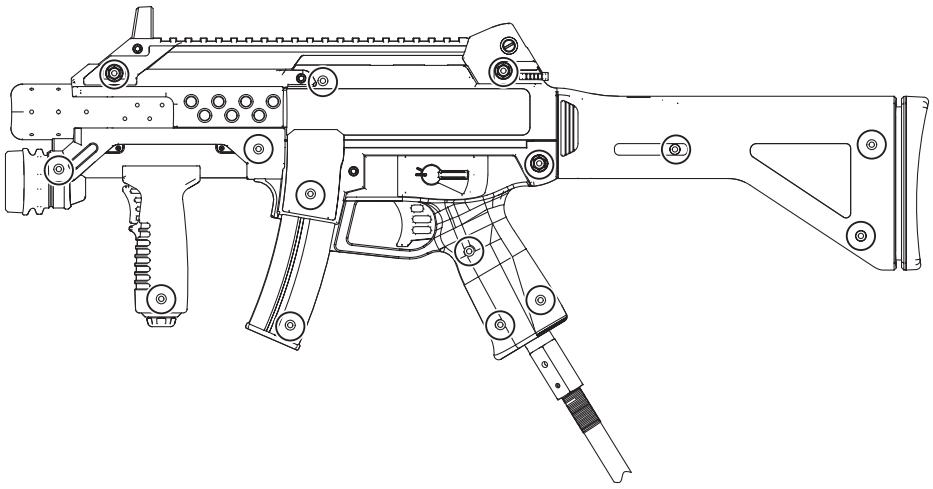

FIG. 10 a

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● With the right shell lying flat, carefully lift the left shell from the right shell.

PHOTO 10 b

● Remove the microswitch to be replaced from Cover R. There are a total of three microswitches.

PHOTO 10 c

● Remove the soldering to take out the microswitch.

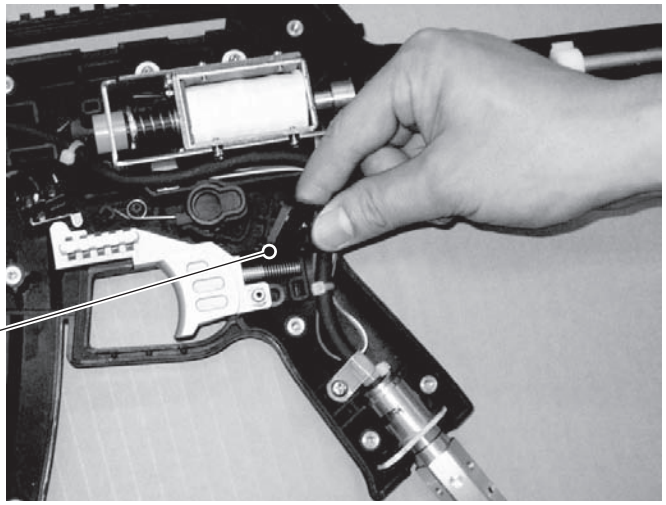

PHOTO 10 d

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● Solder the new microswitch in place to reconstruct the gun controller. When performing this step, verify the points listed below before reattaching Cover L and Cover R.

●The wires and connectors are laid out correctly in Cover R.
●The bearing holder is securely in place when the pad assembly spring is compressed.
●The selector is laid out horizontally.
●The selector joint and selector spring are set properly.

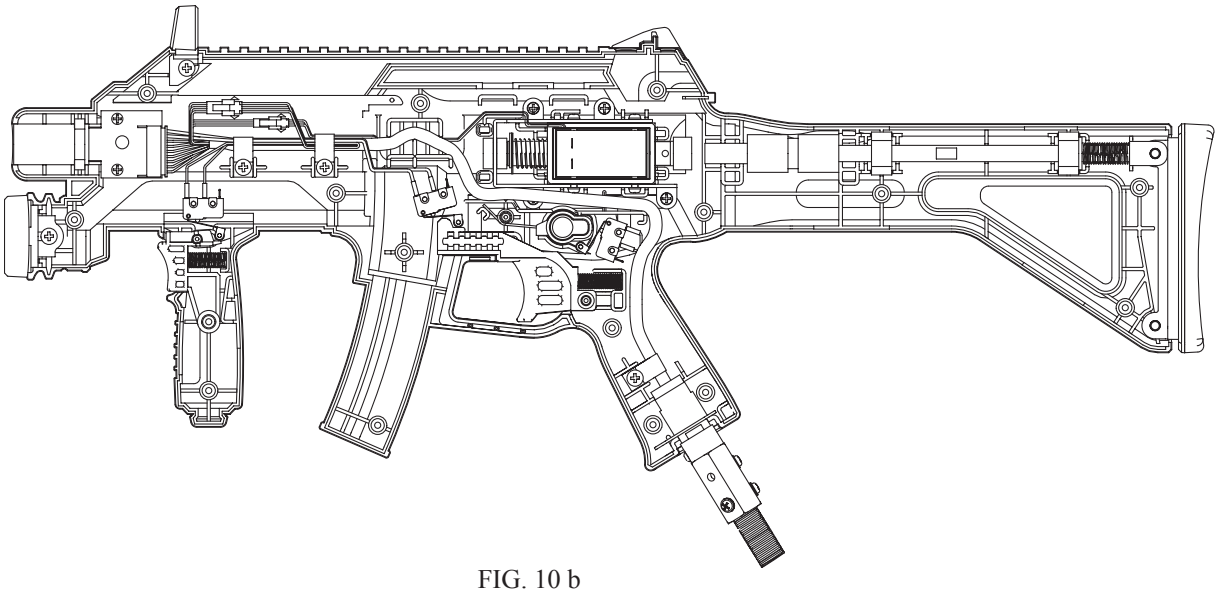

FIG. 10 b

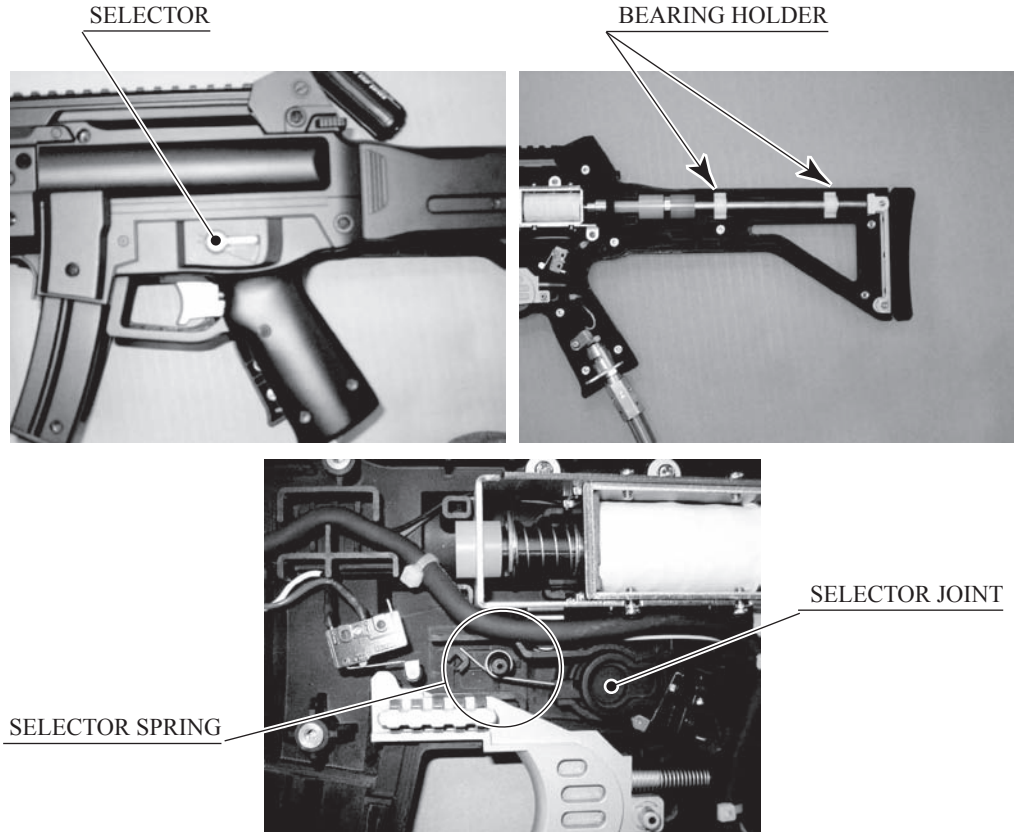

PHOTO 10 e

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● Operate the TRIGGER, SHOT SELECTOR and ACTION buttons to make sure that the microswitches turn ON/OFF correctly.

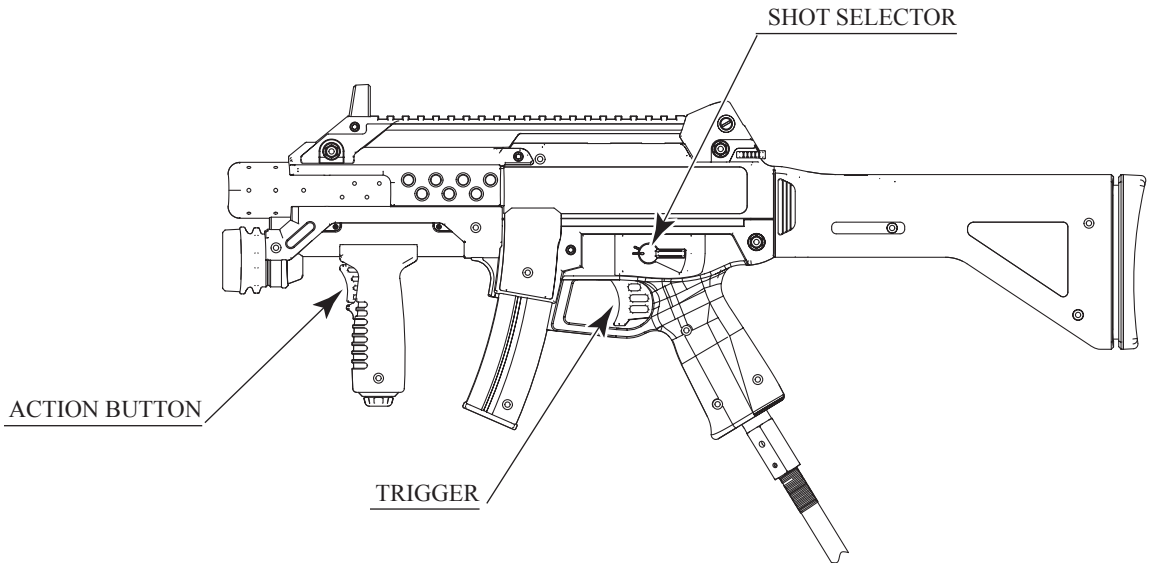

FIG. 10 c

● After replacement, perform an INPUT TEST, referring to the instructions in "Game Test Mode".

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REPLACING THE SENSOR UNIT

- Follow instructions of "Replacing the Microswitch" to remove the cover L.
- Remove the connector to replace the sensor unit.

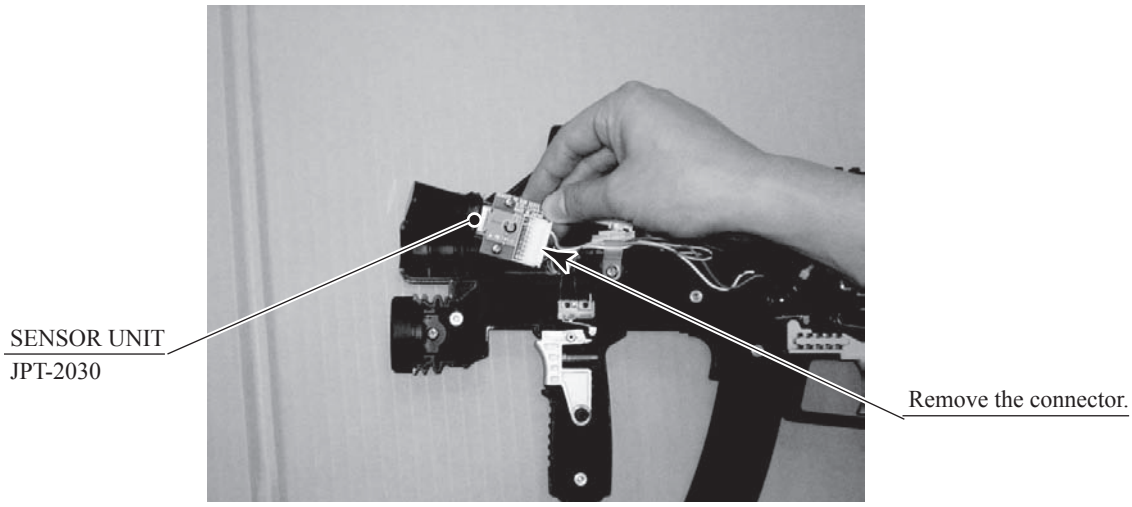

PHOTO 10 f

- Refer to the previous item, then attach COVER R while being careful of each of the parts.
- After replacement, perform a GUN ADJUSTMENT, referring to the instructions in "Game Test Mode".

REPLACING THE SOLENOID

- Follow instructions of "Replacing the Microswitch" to remove the cover L.

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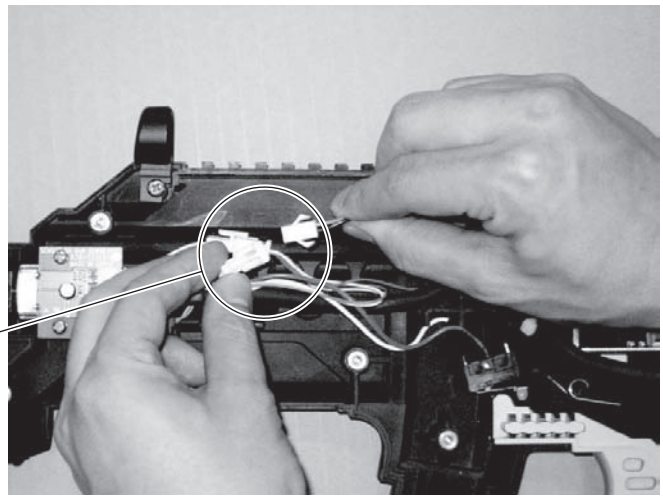
● Remove the 2P connector, wire and 4 screws to take off the solenoid assembly.



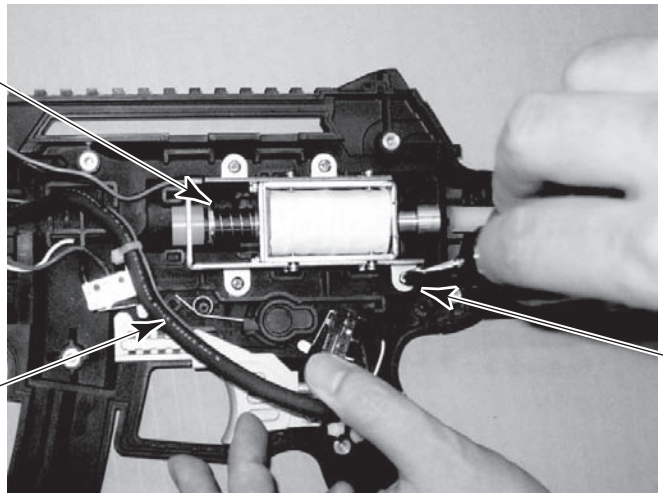


PHOTO 10 g

● Remove the 8 screws and replace the solenoid.

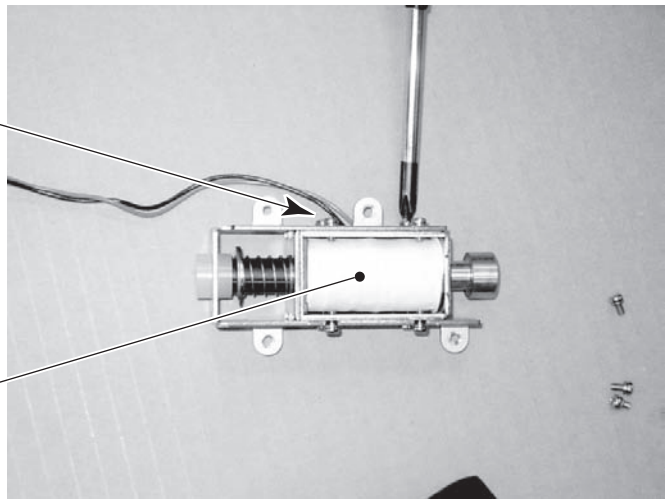


PHOTO 10 h

● Secure the solenoid assembly with 4 screws and replace the connector. When doing this, make sure not to damage the wiring.

● Refer to the previous item, then attach COVER R while being careful of each of the parts.

● After replacement, perform an OUTPUT TEST, referring to the instructions in "Game Test Mode".

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11. IC CARD UNIT

WARNING!

- When working with the product, be sure to turn the power off. Working with the power on can cause an electric shock or short circuit accident.
- Be careful not to damage the wires. Damaged wires may cause electric shock, short circuit or present a risk of fire.
- Be careful not to lose the fasteners for the screws and nuts. Contact between metal fasteners and electrically live parts can cause electric shock, short circuit or fire.

CAUTION!

- Be careful not to trap your fingers when opening or closing the control panel.
- The solenoid on the IC card unit may become hot. Take care as there is a risk of accidental burns.

11-1 HOW TO CLEAN THE IC CARD UNIT

CAUTION!

Observe the following points to prevent damage when cleaning accessory surfaces.

- Remove smears using a dry, soft cloth (flannel, etc.). Do not use coarse gauze or other harsh materials.
- For smear removing solvent, alcohol (ethanol) is recommended. When using chemical detergent, be sure to follow the instructions below:
  - Soak a soft cloth in a neutral household detergent diluted with water. Wring the cloth well then clean down the surface.
  - Do not use bleach or detergent that contains abrasive agents.
  - Do not use alkaline chemical detergents such as "glass cleaner" available on the market or solvents such as thinner, etc.
- Do not scrape or scratch surfaces using brushes, scouring pads or other hard cleaning utensils.

Clean the interior of the IC card unit once a month.
At the same time, check to make sure that no intentional damage has been done to the game unit.
Because IC cards are inserted into the IC card unit for each play, it may become dirty and foreign matter may collect in the unit.

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● Turn the power off.

● Unlock the coin chute door using the master key.

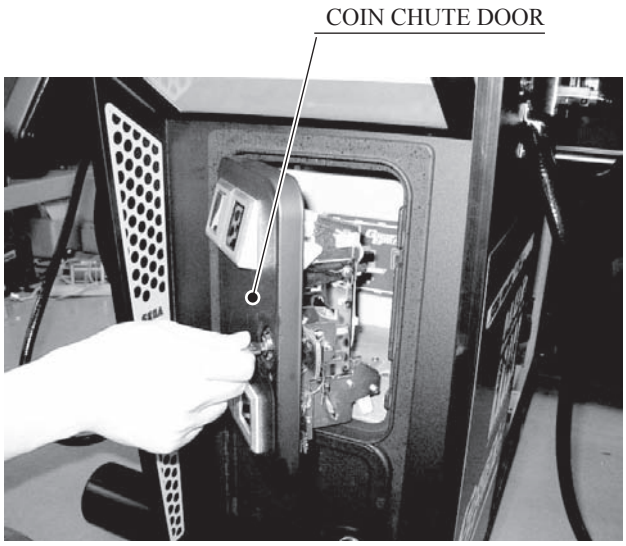

PHOTO 11. 1 a

● Lift the control panel by pulling it up while you pull on the internal ceiling flap. Make sure that the stay remains hooked in place.

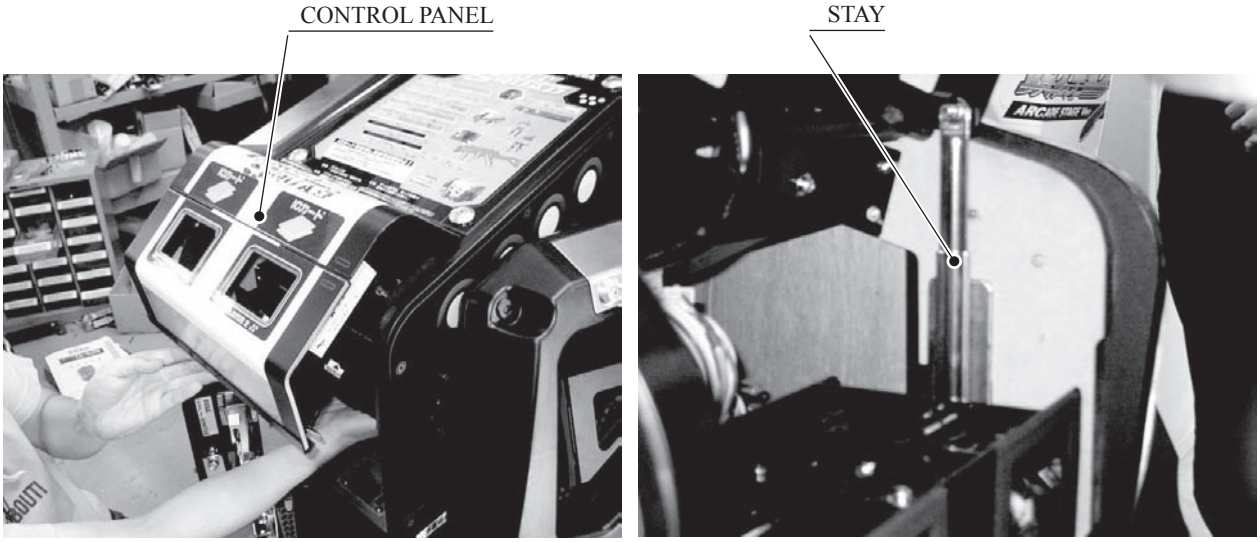

PHOTO 11. 1 b

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● Disconnect the single connector.

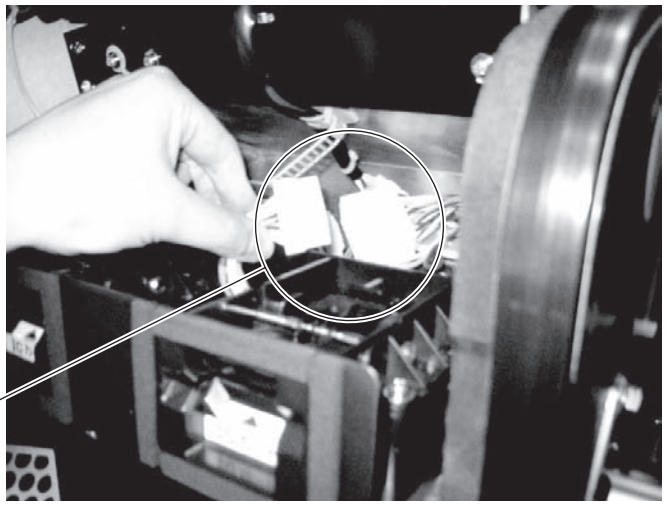

PHOTO 11. 1 c

● Remove the 2 truss screws.

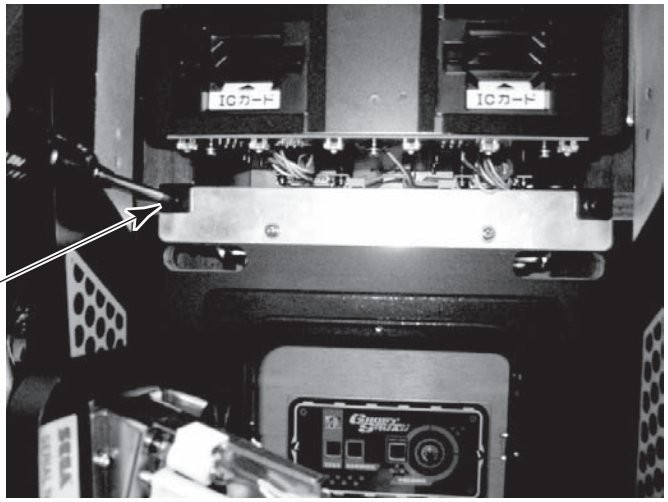

PHOTO 11. 1 d

● Pull the IC card unit towards you to remove it.

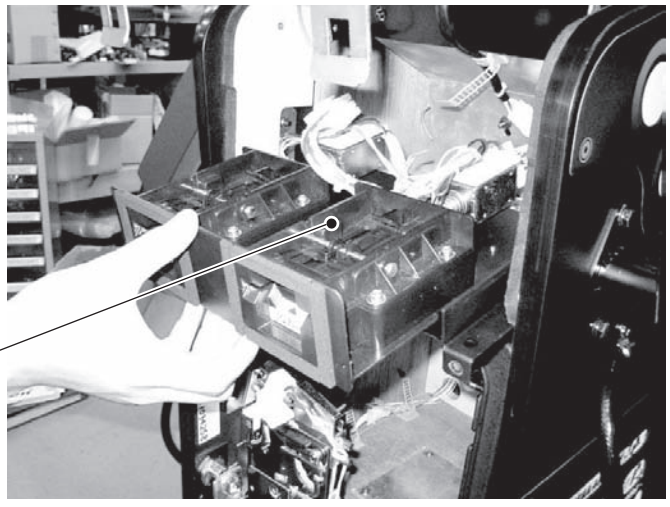

PHOTO 11. 1 e

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● Undo the 2 screws and remove the sensor bracket.

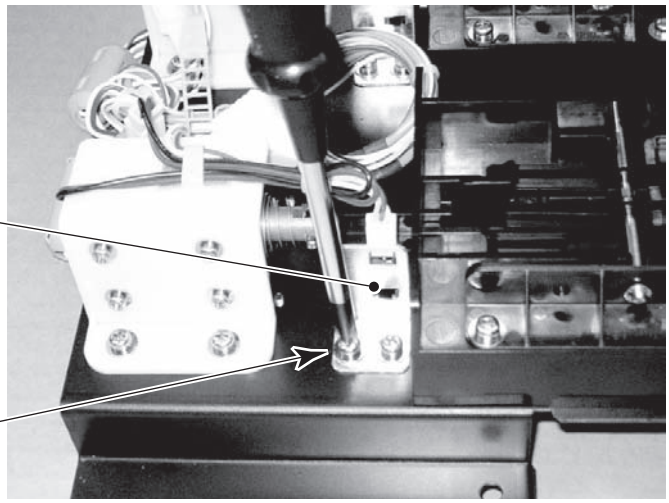

PHOTO 11. 1 f

● Undo the 4 screws, and remove the RW guide upper.

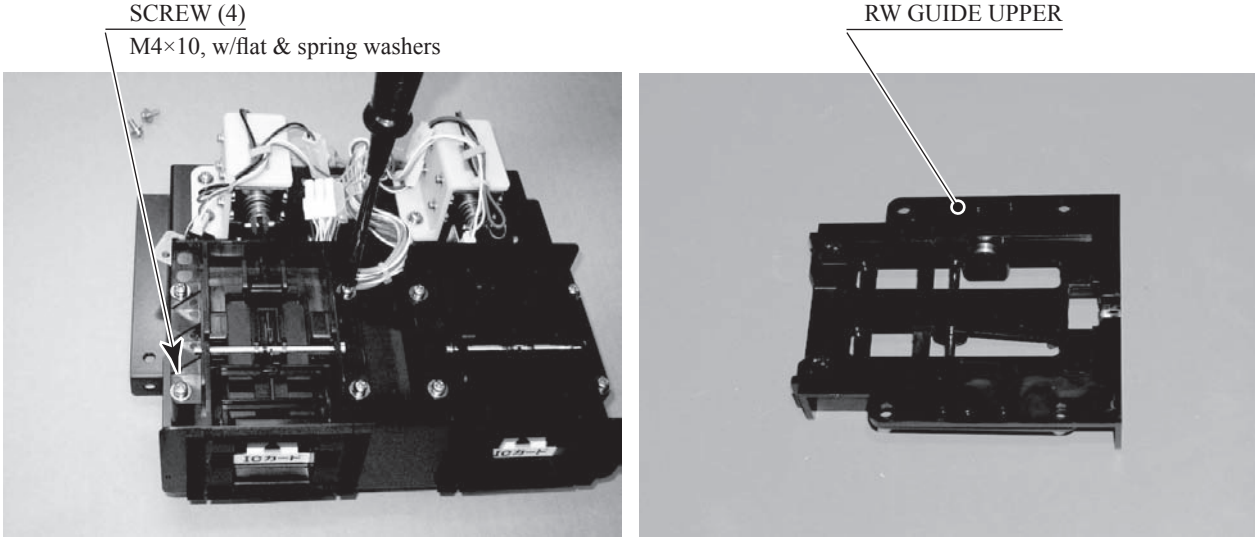

PHOTO 11. 1 g

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● Wipe any dirt off the surfaces that touch the IC cards. Clear any foreign matter that has collected in the unit. The roller is a small component, so take the same precautions that you would for the screws to avoid losing it.

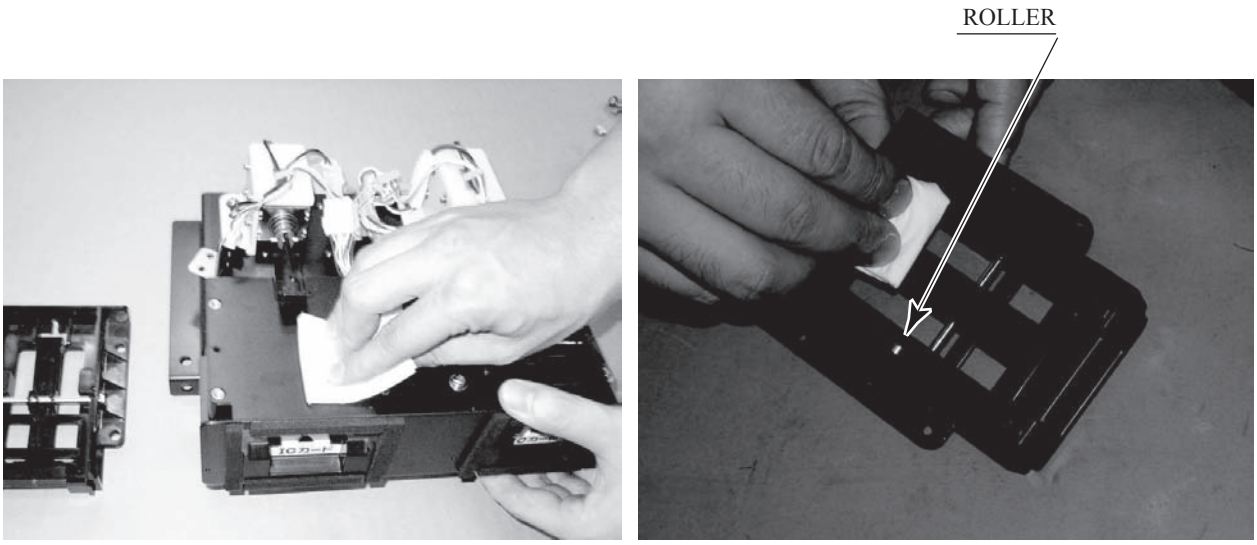

PHOTO 11. 1 h

● If you wipe the unit using a moist cloth, make sure that the unit is completely dry.

● When you are reattaching the RW guide upper, attach the lock arm to the RW guide upper.

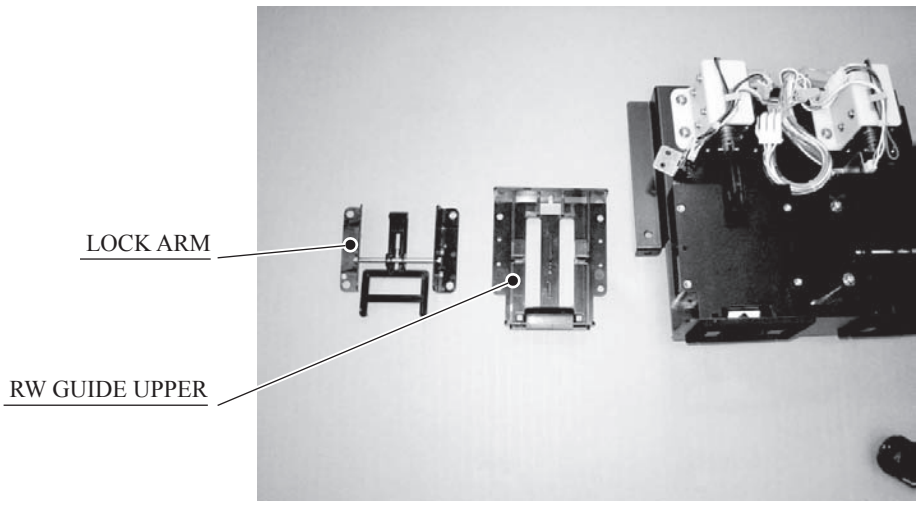

PHOTO 11. 1 i

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● Attach the RW guide upper by inserting the push rod from the RW guide lower into the hole in the RW guide upper. Take care not to lose the roller at this time.

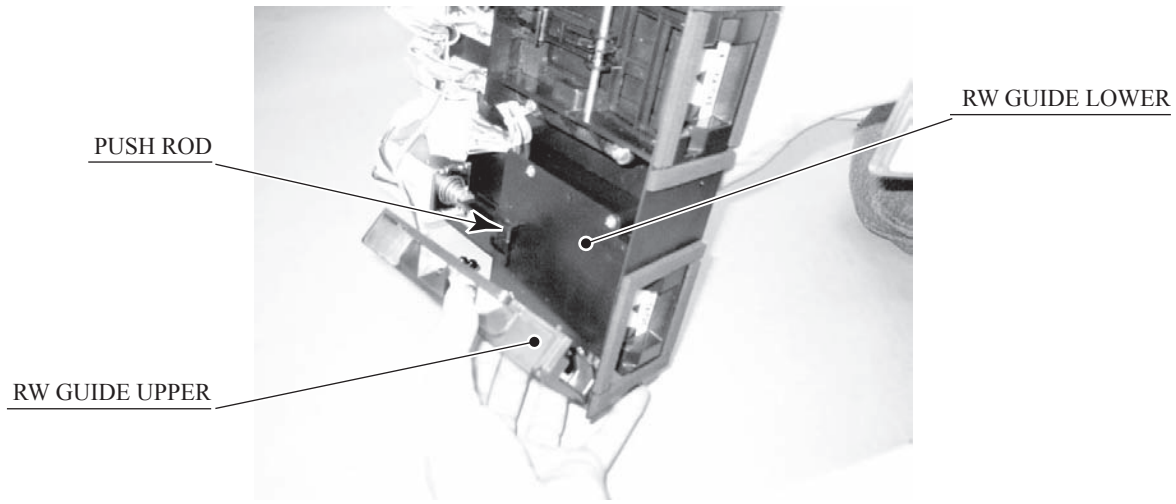

PHOTO 11. 1 j

● Attach the RW guide upper. Take note of the following points when you are attaching this component. Additionally, after attaching the RW guide upper, move the push rod with your hand to make sure that it works correctly and that the tab passes through the hole.

• Insert the lock arm into the lower side of the push rod.
• Hook the spring onto the rib.

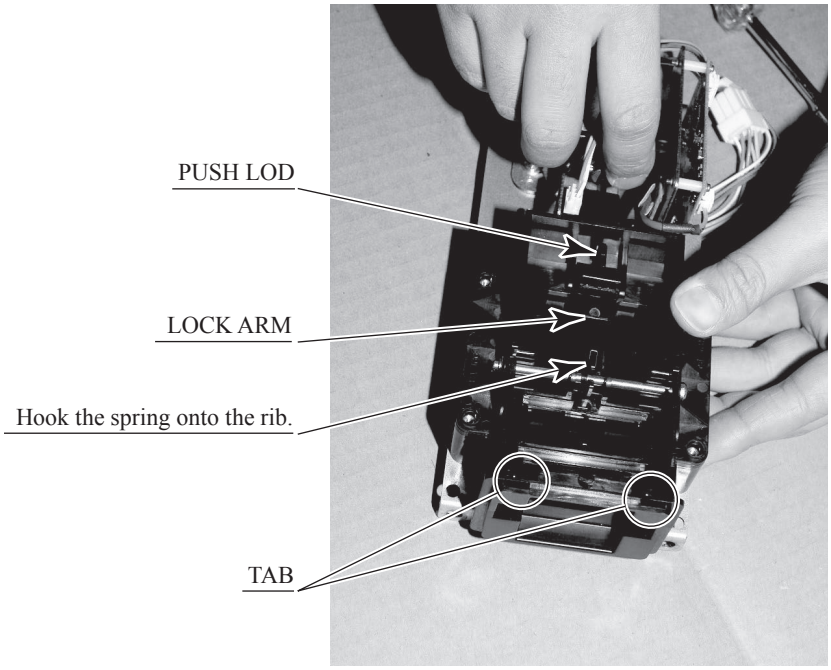

PHOTO 11. 1 k

● Attach the sensor bracket by reversing the previously described procedure, and attach the IC card unit, connect the connector and close the control panel.

● Lock the coin chute door.

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11-2 FIXING JAMMED CARDS

If an IC card becomes jammed, push out the IC card using your fingertips through the square hold in the RW guide.

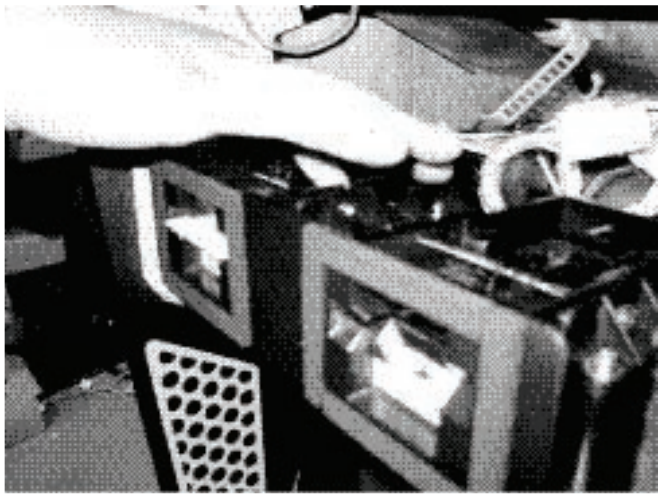

PHOTO 11. 2 a

If an IC card becomes jammed, it may be due to one of the following various reasons.

- Foreign matter other than the IC card has entered the slot.
- A thread or other foreign matter is stuck to the IC card.
- 3 or more cards have been inserted at once.

If there is a sticker attached to the IC card, although it may be possible to continue to play games normally, the card may become jammed when 2 cards are inserted together, such as when renewing the card.

After removing the jammed card, make sure you find the cause of the jam.

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12. PROJECTOR

CAUTION!

Since the Projector has been adjusted at the time of shipment, avoid making further adjustments without good reason.

STOP
IMPORTANT!

The Projector is subject to color deviation due to Convergence deviation caused by the geomagnetism at the installation location and peripheral magnetic field. After the installation of machine, and before commencing operation, check for Convergence deviation and if deviated, make adjustments.

Projector adjustments are stored. Due to distortion or color deviation in the TEST mode, if an adjustment is necessary, use the Remote Control to make adjustments.

12-1 CLEANING THE SCREEN

CAUTION!

Since the Projector screen is susceptible to damage, pay careful attention to its handling. When cleaning, refrain from using water or volatile chemicals.

When the screen surface becomes dirty with dust, etc., clean it by using a soft cloth such as gauze. When water, and volatile chemicals such as benzine, thinner, etc., spill on the screen surface, it may be subject to damage, therefore, do not use them. Also, since the surfaces are susceptible to damage, refrain from rubbing them with a hard material or using a duster.

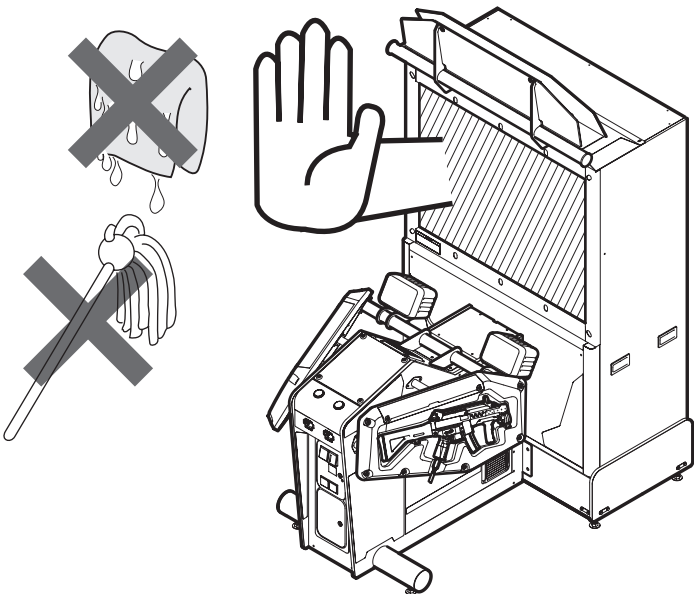

FIG. 12. 1

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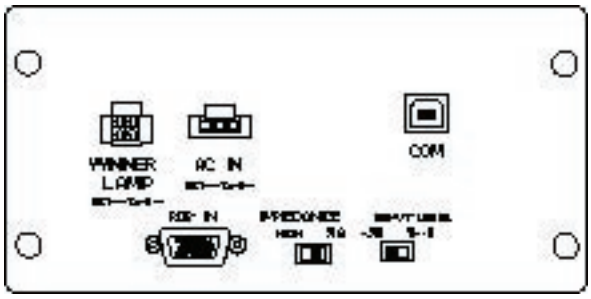
SETTING THE INTERFACE

STOP
IMPORTANT!

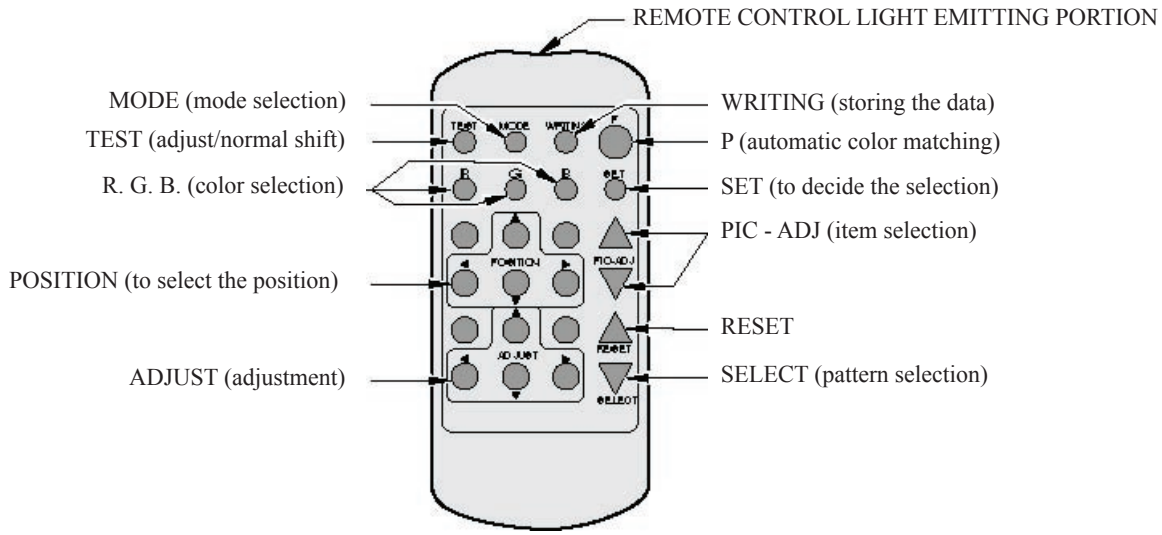
In this product, set to INPUT LEVEL: 0.7 V and IMPEDANCE: 75Ω. Failure to observe this can cause CRT membrane to burn or Shutdown device to function resulting in power off.

The Projector's Connector Panel contains the Interface setting SW.



REMOTE CONTROL BUTTONS

When adjusting the Projector, direct the Remote Control's light emitting portion towards the Projector Screen.



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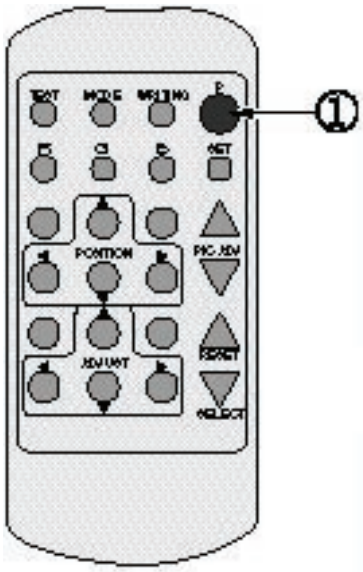
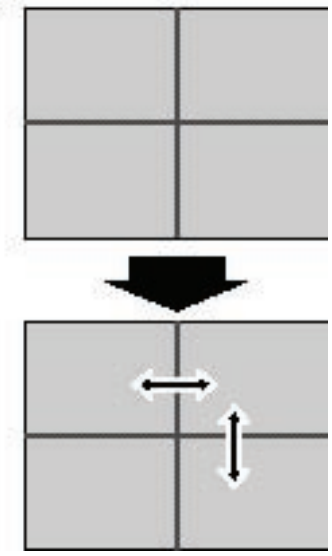
AUTOMATIC COLOR MATCHING

The Projector may be subject to color deviations affected by earth magnetism, the building steel frames, etc. When the Projector is initially installed or the Projector's installation position is changed, have the color matching performed automatically.



- Keep pressing the P button (red) for approximately 3 seconds to have the ensuing movements performed automatically.



The Projector will shift to the color deviation correction mode from the game mode, with the green cross pattern appearing on the screen.

The cross pattern moves up/down and right/left to start the movement of searching the correct screen position and inclination.

When the green cross pattern movements are finished, similar detection is performed sequentially in order of red and then blue cross movements. After detecting by green, red and blue cross movements, the game mode returns with the color deviation status being corrected.

- Although very rarely, the TRY AGAIN error display in red may appear. At this time, press the P button (red) for approximately 3 seconds.
  Even after the above operation is repeated, if the error condition still exists, then the display shifts to PLEASE ADJ. In this case, the auto color matching function can not be used. Contact the place of contact herein stated or where the product was purchased from.

- If the automatic color matching indicates an error, color matching can manually be performed. Refer to CONVERGENCE ADJUSTMENT (manual color matching).

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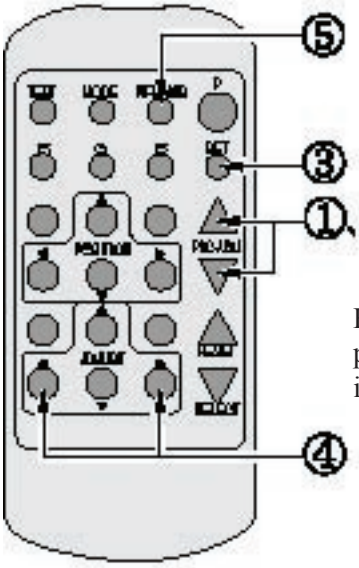
ADJUSTING THE ON-SCREEN CONTRAST

Although the on-screen picture quality has been adjusted at the time of shipment from the factory, the on-screen contrast can be readjusted if desired. When the Game Board is replaced, readjustment may be necessary. Changing the CONTRAST causes the light and shade of the on-screen images to be changed.



(1) Press either ▲ or ▼ PIC - ADJ button.

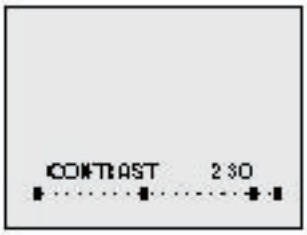
The on-screen menu will have one item in purple and 6 items in white.

Herein, procedure (2) is skipped.

(2) Choose CONTRAST by using either ▲ or ▼ PIC - ADJ button.

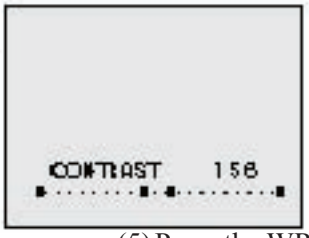
Have CONTRAST displayed in purple. Since CONTRAST is selected initially, no particular operation is required in this case.

(3) Press the SET button (to decide selection).



When the selection of the CONTRAST adjustment mode is decided, the adjustment data scale bar appears on the screen.

(4) Make adjustment by using either ◀ or ▶ ADJUST button.



As the Cursor is moved, the adjustment data value changes. Make adjustment so as to obtain the desired on-screen contrast status.

(5) Press the WRITING button (for storing and finish).

The WRITING display appears and the adjustment data is stored.

- When discontinuing the adjustment, choose EXIT from the menu at the stage of procedure (2) and press the SET button.
- To continue adjusting other menu items, repeat procedure (2)~(5).
- Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will remain when the power is turned on next time.

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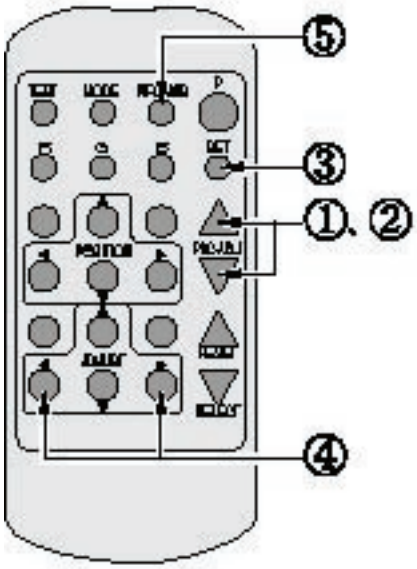
ADJUSTING THE SCREEN BRIGHTNESS

Although the on-screen picture quality has been adjusted at the time of shipment from the factory, readjustment can be made if desired. When the Game Board is replaced, readjustment may be necessary. Changing the BRIGHTNESS causes the brightness of the on-screen images of black portions to be changed.



(1) Press either ▲ or ▼ PIC - ADJ button.

The on-screen menu will have one item in purple and 6 items in white.

(2) Choose BRIGHTNESS by using either ▲ or ▼ PIC - ADJ button.

Have the BRIGHTNESS displayed in purple.

(3) Press the SET button (to decide selection).

When the selection of the BRIGHTNESS adjustment mode is decided, the adjustment data scale bar appears on the screen.

(4) Make adjustment by using either ◀ or ▶ ADJUST button.

As the Cursor is moved, the adjustment data value changes. Make adjustment so as to obtain the desired on-screen brightness status.

(5) Press the WRITING button (for storing and finish).

The WRITING display appears and the adjustment data is stored.

- When discontinuing the adjustment, choose EXIT from the menu at the stage of procedure (2) and press the SET button.
- To continue adjusting other menu items, repeat procedure (2)~(5).
- Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will remain when the power is turned on next time.

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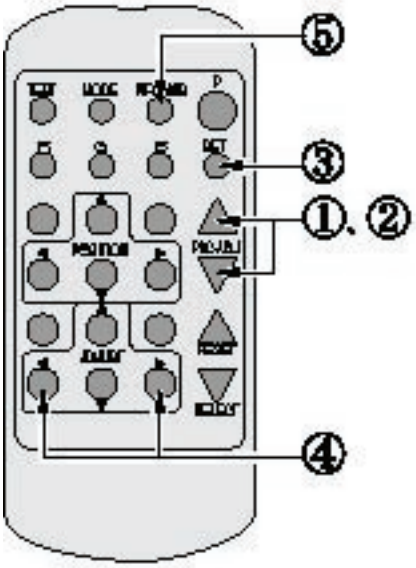
ADJUSTING THE ON-SCREEN DISPLAY POSITION

Although the on-screen display position (H. POSI, V. POSI) has been adjusted at the time of shipment from the factory, readjustment can be made if desired. When the Game Board is replaced, readjustments may be necessary.



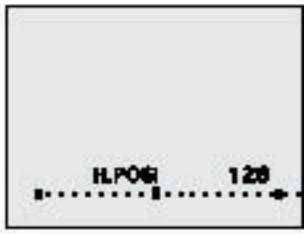
(1) Press either ▲ or ▼ PIC - ADJ button.

The on-screen menu will have one item in purple and 6 items in white.

(2) Choose H. POSI or V. POSI by using either ▲ or ▼ PIC - ADJ button.

Have the H. POSI or V. POSI displayed in purple. The Figure shows the status in which
H. POSI is selected.

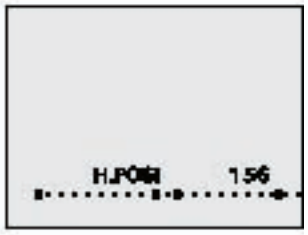
(3) Press the SET button (to decide selection).



When the selection of the H. POSI or V. POSI is decided, the adjustment data scale bar appears on the screen.

(4) Make adjustment by using either ◀ or ▶ ADJUST button.

When making adjustments in vertical directions, also use either ◀ or ▶ ADJUST button.



As the Cursor is moved, the adjustment data value changes. Make adjustment so as to obtain the desired on-screen position status.

(5) Press the WRITING button (for storing and finish).

The WRITING display appears and the adjustment data is stored.

- When discontinuing the adjustment, choose EXIT from the menu at the stage of procedure (2) and press the SET button.
- To continue adjusting other menu items, repeat procedure (2)~(5).
- Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will remain when the power is turned on next time.

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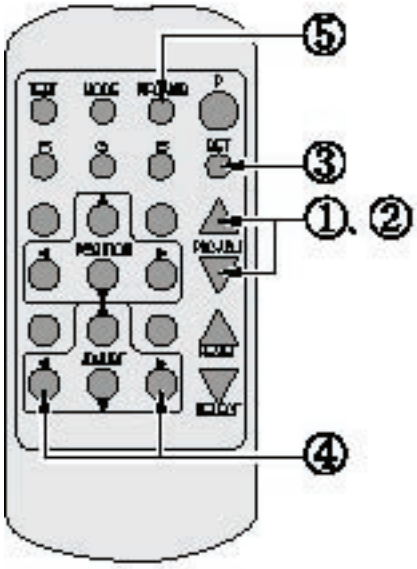
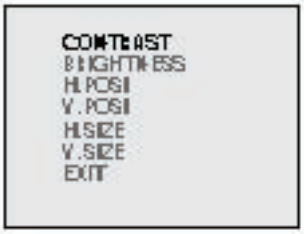
ADJUSTING THE SCREEN SIZE

Although the on-screen size (H. SIZE, V. SIZE) has been adjusted at the time of shipment from the factory, readjustment can be made if desired. When the Game Board is replaced, readjustments may be necessary.



(1) Press either ▲ or ▼ PIC - ADJ button.

The on-screen menu will have one item in purple and 6 items in white.

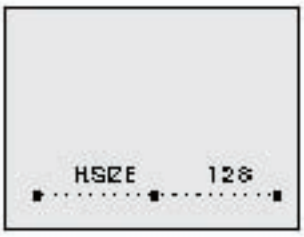


(2) Choose H. SIZE or V. SIZE by using either ▲ or ▼ PIC - ADJ button.

Have the H. SIZE or V. SIZE displayed in purple. The Figure shows the status in which
H. SIZE is selected.

(3) Press the SET button (to decide selection).

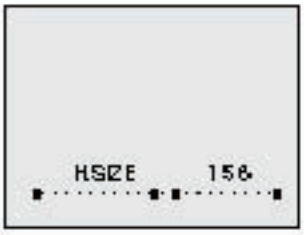
When the selection of the H. SIZE or V. SIZE adjustment mode is decided, the adjustment data scale bar appears on the screen.



(4) Make adjustment by using either ◀ or ▶ ADJUST button.

When making adjustments in vertical directions, also use either ◀ or ▶ button.

As the Cursor is moved, the adjustment data value changes. Make adjustment so as to obtain the desired on-screen position status.



(5) Press the WRITING button (for storing and finish).

The WRITING display appears and the adjustment data is stored.

- When discontinuing the adjustment, choose EXIT from the menu at the stage of procedure (2) and press the SET button.
- To continue adjusting other menu items, repeat procedure (2)~(5).
- Unless the adjustment data is stored, the data in the adjusted status will be erased at the time the power is turned off and the pre-adjustment status will remain when the power is turned on next time.

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CONVERGENCE ADJUSTMENT (manual color matching)

CAUTION!

To avoid circuitry malfunctioning due to electrical load increase, never utilize CONVERGENCE ADJUSTMENT (Line Convergence Adjustment in particular) for adjusting screen size changes.

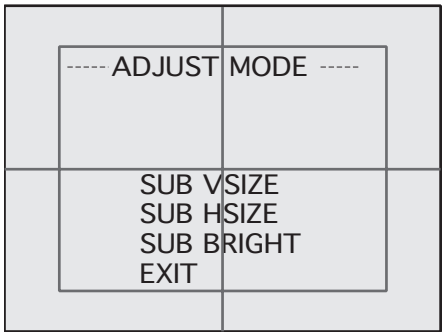
There is no means to restore the Convergence Adjustment data once stored, to its original state. To avoid changing the screen size by erroneously using convergence adjustment, do not perform the green Line Convergence Adjustment.

As such, be sure to perform the adjustment work from this page onward by the Technical staff and the Location's Maintenance Man who are well versed in such adjustment work. In the Static Convergence Adjustments, if satisfactory adjustments can not be performed, do not make another convergence adjustments inadvertently. Contact the office herein stated or where the product was purchased from.

STOP
IMPORTANT!

- To avoid making the adjustment work ineffective, do not press the RESET button during adjustment.
- To discontinue adjustment work, keep pressing the TEST button for approximately 3 seconds at the stage before storing the adjustment data by pressing the WRITING button.
- Should the screen be abnormally disturbed by noise due to static electricity, etc., turn the power off without storing the adjustment data.
- Pressing the ▲ or ▼ PIC - ADJ button in the Convergence Adjustment mode status will display the Adjustment Menu shown right. Do not utilize this Adjustment Menu as this is the one applied at the factory.

  Adjusting this menu causes the Customer's adjustment range to be deviated.



Adjustment menu used in the factory.

Should the menu shown right be displayed by mistake, first choose EXIT by using either ▲ or ▼ PIC - ADJ button and then press the SET button.

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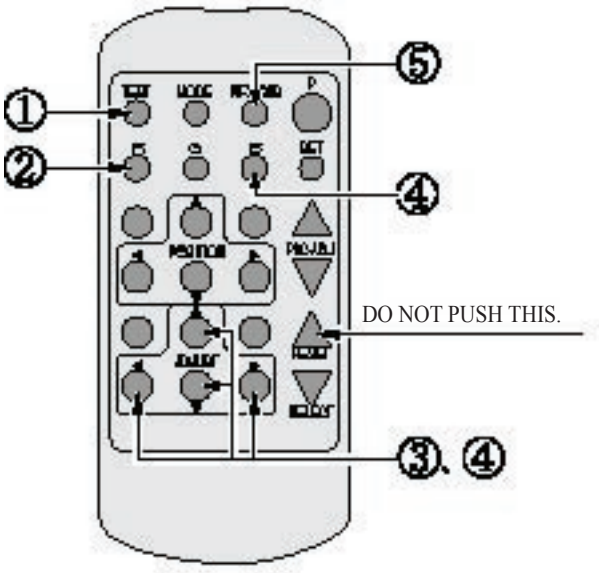
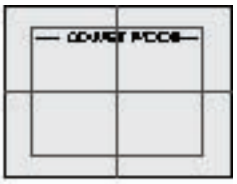
STATIC CONVERGENCE ADJUSTMENT

In the STATIC CONVERGENCE adjustment, each of red and blue images is comprehensively moved to and superimposed on the green color. If automatic color matching function is not sufficiently satisfactory, perform this adjustment. Be sure to perform automatic color matching before starting the above adjustment.



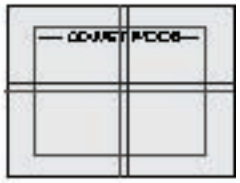
When either of (2) (4) COLOR SELECT buttons (R, B) is pressed, if the color desired to be adjusted disappears, press that particular button again. For example, if the red color needs to be adjusted again at the stage of (4), the R button need to be pressed twice.

(1) Keep pressing the TEST button for approximately 3 seconds.



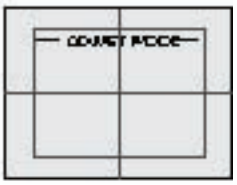
The screen will change to ADJUST MODE from the Game mode to cause the green test pattern to be displayed on the screen.

(2) Press the R button to have the red adjustment mode.



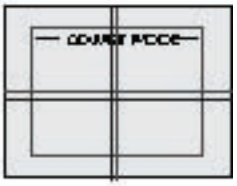
The red test pattern is added to the display. The frame color turns red and this signifies the red adjustment mode.

(3) Make adjustment by using the ▲▼◀▶ ADJUST buttons.



Make adjustment so as to have red superimposed on green. When red is superimposed on green, the color becomes yellow.

(4) Press the B button to have the blue adjustment mode.



Similarly as in the case of red, adjust the blue color. When green, red, and blue are superimposed, the color becomes white.

(5) Press the WRITING button (for storing and finish).

The WRITING display appears and the adjustment data is stored. After the data is stored, the Game mode returns.

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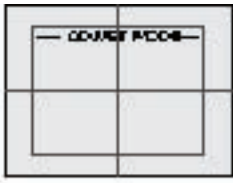
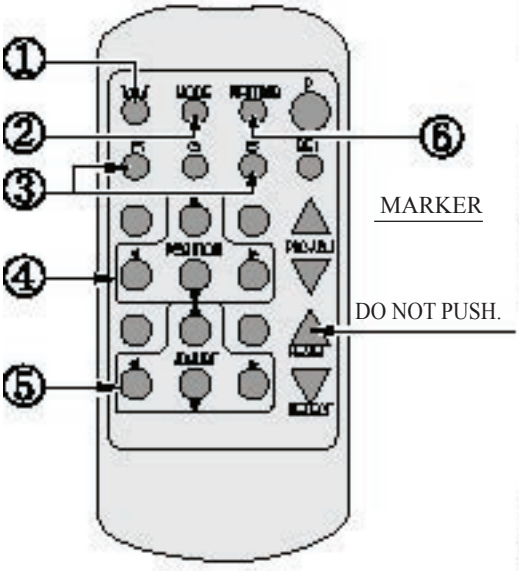
LINE CONVERGENCE ADJUSTMENT

In the LINE CONVERGENCE adjustment, the adjustment point of the column line (vertical) or row line (horizontal) is comprehensively moved for color matching. It is convenient to utilize this adjustment when the color of the column line or row line is uniformly deviated.

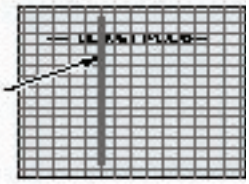
(1) Keep pressing the TEST button for approximately 3



The screen changes to ADJUST MODE from the Game Board mode and displays the green test pattern.

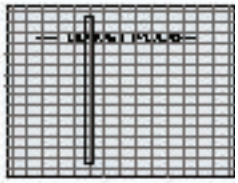


(2) Press the MODE button once to have the POINT ADJUSTMENT mode. (Note 1)



The crosshatch test pattern appears and the vertically long MARKER is shown.

(3) Using either R or B button, select the desired color to be adjusted. (Note 2) Although the green color can also be selected by using the G button, to avoid the screen size change adjustment, do not choose green.

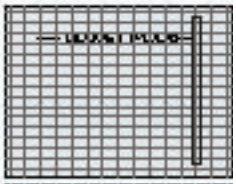


The selected color is displayed by superimposing on green. The MARKER will be in the color selected.

(Note 1) When the MODE button is repeatedly pressed, the adjustment modes will circulate as follows:

STATIC ADJUSTMENT MODE
↓
LINE ADJUSTMENT MODE
↓
POINT ADJUSTMENT MODE

(4) By using the ▲▼◀▶ POSITION buttons, move the MARKER to the position to be adjusted.

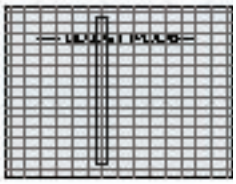


Use the ◀ ▶ buttons to select the column line, and the MARKER moves in the right/left direction. However, the movable range is predetermined.

Use the ▲ ▼ buttons to select the row line and the MARKER moves in the up/down direction. However, the movable range is predetermined.

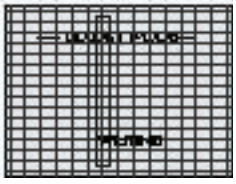
(Note 2) When either of the COLOR SELECT buttons (R, B) is pressed, if the desired color to be adjusted disappears, press that particular button again.

(5) Make adjustment by using the ▲▼◀▶ ADJUST buttons.



The selected column line or row line (shown left is the column line) can be moved in the desired up/down or right/left directions as applicable.

(6) Press the WRITING button (for storing and finish).



WRITING is displayed and the adjustment data is stored. After the data is stored, the Game Board screen returns.

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13. COIN SELECTOR

HANDLING THE COIN JAM

If the coin is not rejected when the REJECT button is pressed, open the coin chute door and open the selector gate. After removing the jammed coin, put a normal coin in and check to see that the selector correctly functions.

CLEANING THE COIN SELECTOR

STOP
IMPORTANT!

- Remove and clean smears by using a soft cloth dipped in water or diluted chemical detergent and then squeezed dry.
- Never apply machine oil, etc. to the Coin Selector.
- After cleaning the Coin Selector, insert a regular coin in the normal working status and ensure that the Selector correctly functions.

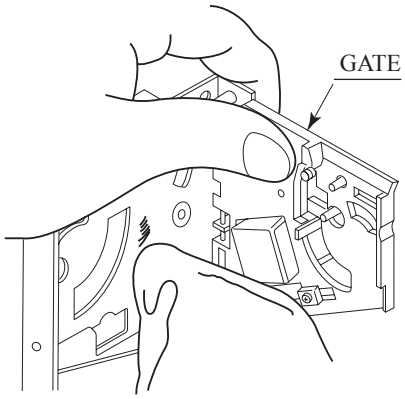

FIG. 13 a

The coin selector should be cleaned once every 3 months. When cleaning, follow the procedure below:

- Turn the power for the machine OFF. Open the coin chute door.
- Open the gate and dust off by using a soft brush (made of wool, etc.).
- Remove and clean smears by using a soft cloth dipped in water or diluted chemical detergent and then squeezed dry.
- Remove the CRADLE.
  When removing the retaining ring (E ring), be very careful so as not to bend the rotary shaft.
- Remove stain from the rotary shaft and shaft receiving portions by wiping off with a soft cloth, etc.
- After wiping off as above, further apply a dry cloth, etc. to cause the coin selector to dry completely.

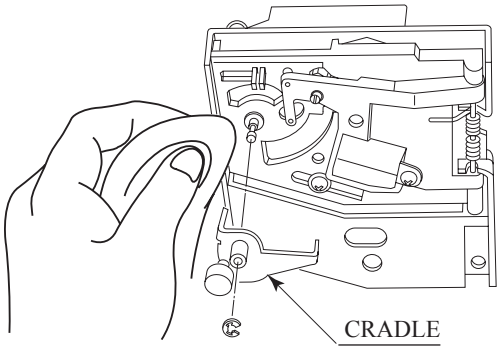

FIG. 13 b

COIN INSERTION TEST

Once every month, when performing the Coin SW Test, simultaneously check the following:

- Does the Coin Meter count satisfactorily?
- Does the coin drop into the Cashbox correctly?
- Is the coin rejected when inserted while keeping the Reject Button pressed down?

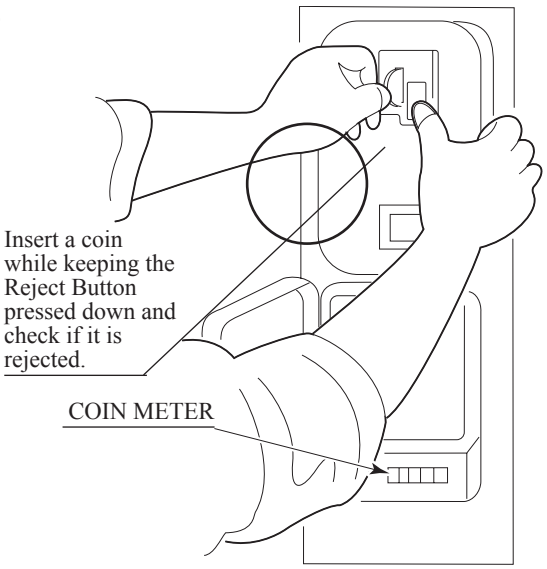

FIG. 13 c

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14. REPLACING THE FLUORESCENT LIGHTS AND LAMPS

WARNING!

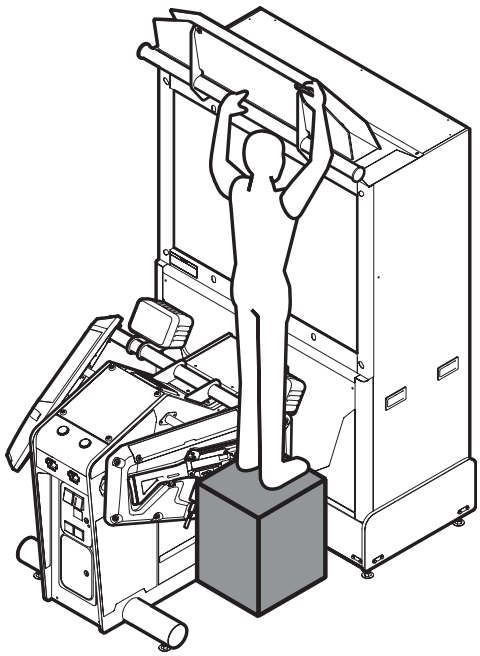
- When performing work, be sure to turn power off. Working with power on can cause electric shock and short circuit hazards.
- The Fluorescent Lamp, when it gets hot, can cause burn. Be very careful when replacing the Fluorescent Lamp.
- Be sure to use lamps of the designated rating. Using lamps of undesignated rating can cause a fire or malfunctioning.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a fire risk.

CAUTION!

- To perform work safely and securely, be sure to prepare a step which is in a secure and stable condition. Performing work without using the step can cause violent falling down accidents.
- Be careful when handling the plastic made parts. Failure to observe this may cause injury due to damage or fragments resulting from damage.

Billboard Internal Fluorescent Light

- Turn the power off.
- Undo the 2 truss screws that hold the pop bracket in place, then remove the billboard pop.



Use a footstool to perform this step.

FIG. 14 a

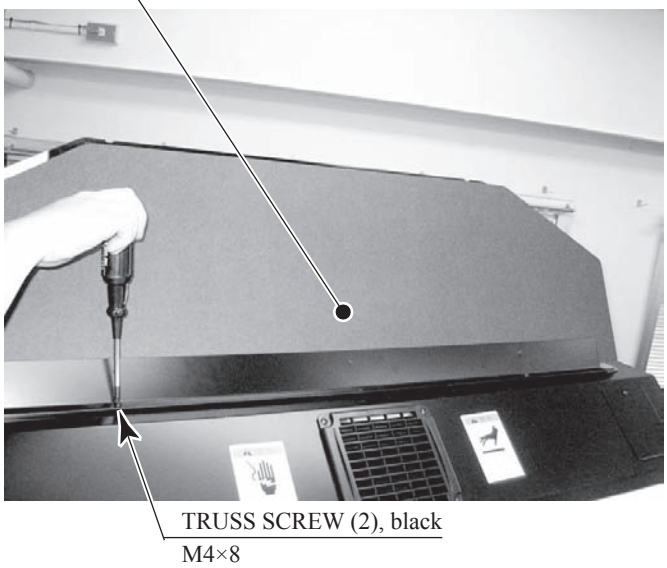


PHOTO 14 a

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●Remove the acrylic panel.

PHOTO 14 b

● Replace the fluorescent light.

PHOTO 14 c

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Instruction Panel Internal Fluorescent Light

● Turn the power off.

● Undo the 4 screws using the supplied L-wrench, and remove the instruction panel.

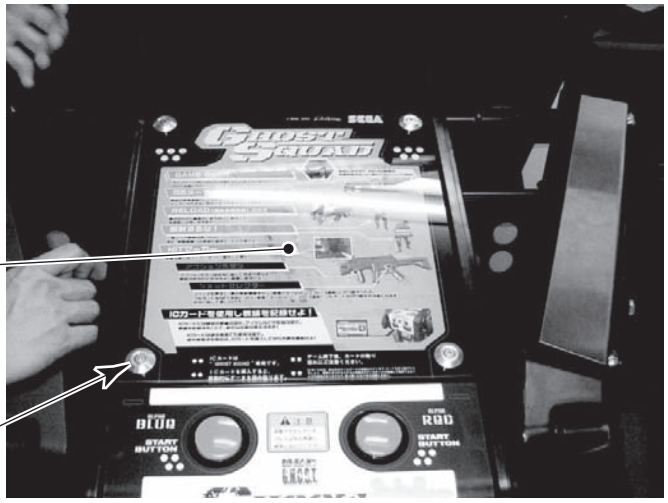

PHOTO 14 d

● Replace the globe-shaped fluorescent light.

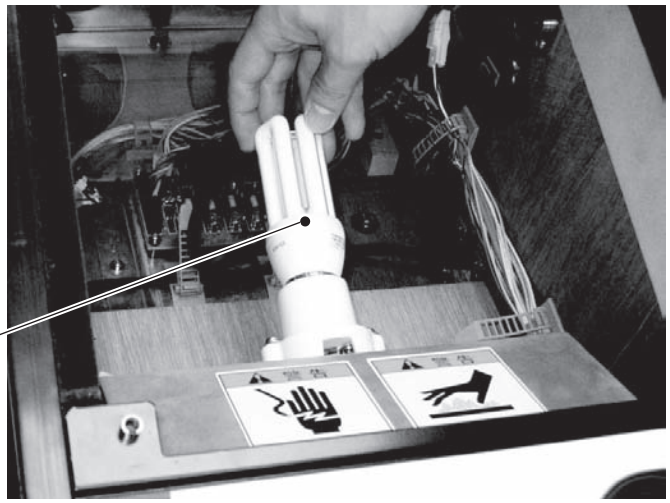

PHOTO 14 e

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Halogen Lamp

● Turn the power off.

● Undo the 4 truss screws and remove the lamp lid.

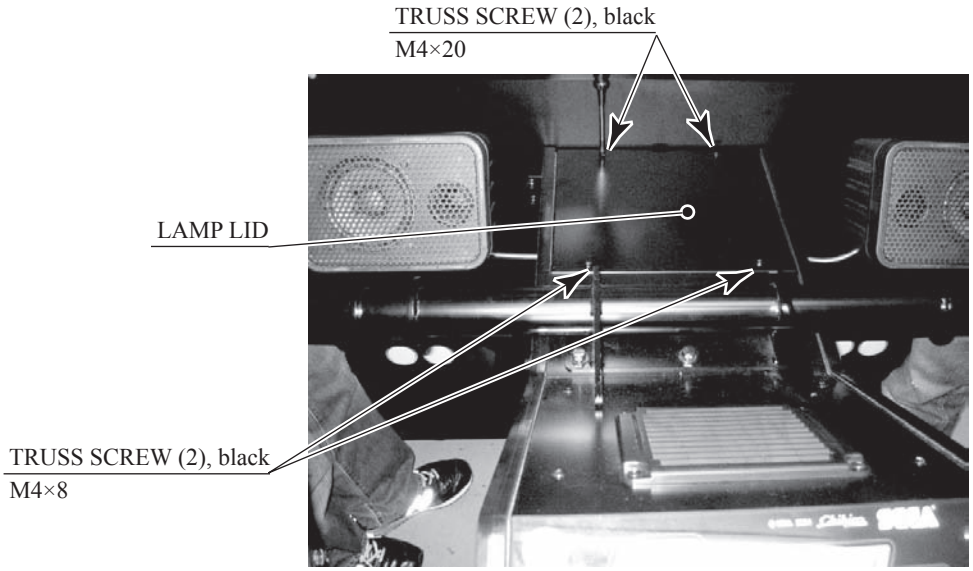

PHOTO 14 f

● Replace the halogen lamp.

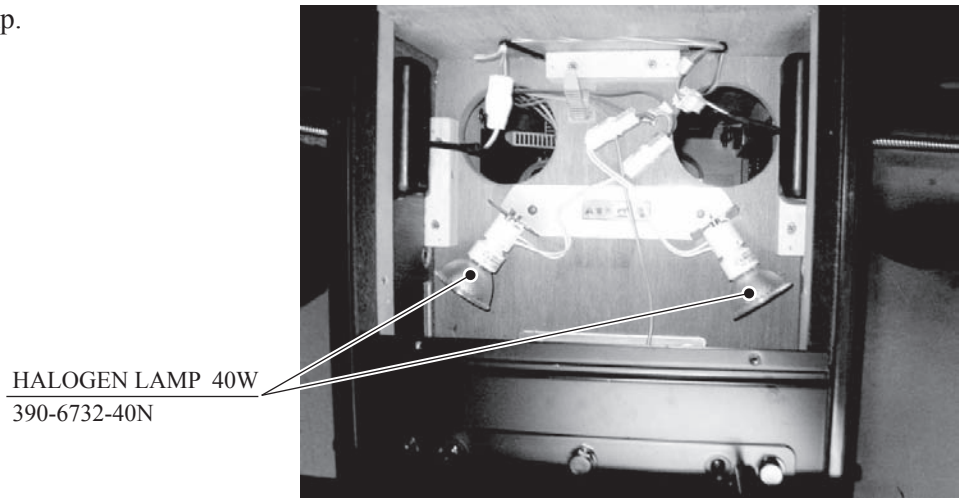

PHOTO 14 g

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15. PERIODIC INSPECTION

The items listed below require periodic check and maintenance to retain the performance of this machine and to ensure safe business operation.
When handling the control unit, the player will be in direct contact with it . In order to always allow the player to enjoy the game, be sure to clean it regularly. Also, it is advisable to provide wet tissue, etc. available for player use.

- Be sure to check once a year to see if Power Cords are damaged, the plug is securely inserted, dust is accumulated between the Socket Outlet and the Power Plug, etc. Using the product with dust as is accumulated can cause fire and electric shock hazards.
- Never use a water jet, etc. to clean inside and outside the cabinet. If wetness occurs for any reason, do not use the product until it has completely dried.
- Periodically once a year, request the place of contact herein stated or the Distributor, etc. where the product was purchased from, as regards the internal cleaning. Using the product with dust as is accumulated in the interior without cleaning can cause a fire or accident. Note that cleaning the interior parts can be performed on a pay-basis.

TABLE 15: PERIODIC INSPECTION TABLE

	Description	Period	Reference
CABINET	Checking adjuster grounding	Daily	3
CONTROL UNIT (GUN CONTROLLER)	Cleaning	As necessary	—
	Checking sight	Weekly	9
	Inspecting switches	Monthly	9
	Inspecting solenoids	Monthly	9
IC CARD UNIT	Cleaning	Monthly	11-1
	Checking for foreign matter	Daily	11-2
COIN SHUTE DOOR	Inspecting coin switches	Monthly	9-2
	Testing coin insertion	Monthly	13
	Cleaning the coin selector	Tri-monthly	13
PROJECTOR	Screen cleaning	Weekly	12-1
	Checking adjustments	Monthly or when moving	6, 12, 9-2
GAME BOARD	Performing memory test	Monthly	9-2
	Checking settings	Monthly	9
POWER SUPPLY PLUG	Inspecting and cleaning	Annually	See above
INTERIOR	Cleaning		
CABINET SURFACES	Cleaning	As necessary	See below

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CLEANING THE CABINET SURFACES

When the cabinet surfaces become dirty, remove stains with a soft cloth soaked in water or diluted (with water) chemical detergent and then wrung dry. To avoid damaging the finish, do not use such solvents as thinner, benzene, etc. (other than ethyl alcohol) or abrasives (bleaching agent and chemical dust-cloth).

Some general-purpose household, kitchen, and furniture cleaning products may contain strong solvents that degrade plastic components, coatings, and print. Before using any cleaning product, read the product's cautionary notes carefully and test the product first on a small area that is not highly visible.

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16. TROUBLESHOOTING

16-1 PROBLEMS NOT INVOLVING THE GAME BOARD

In case a problem occurs, first check wiring connector connections.

WARNING!

- In order to prevent electric shock and short circuit, be sure to turn power off before performing work.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a fire risk.
- After removing the cause of the functioning of the Circuit Protector, reinstate the Circuit Protector. Depending on the cause of the functioning, using the Circuit Protector as is without removing the cause can cause generation of heat and fire hazard.

TABLE 16. 1 a

PROBLEMS	CAUSE	COUNTERMEASURES
With Main SW ON, no activation.	Power is not supplied.	Securely insert the power plug into the plug socket.
	Power supply/voltage is not correct.	Make sure that power supply/voltage is correct.
	The Circuit Protector functioned due to the momentary overload.	After eliminating the cause of overload, reinstate the AC Unit's Circuit Protector (see 7 , Section 6, Refer to the following).
The color on PTV screen is incorrect.	Image adjustment is inappropriate.	Adjust appropriately (see Sec. 12).
Color deviation on PTV screen.	Affected by peripheral machines or the building's steel frames.	Perform convergence adjustment (see Sec. 12).
		Change installation direction or position.
		Move the machine which causes the problem.

CIRCUIT PROTECTOR

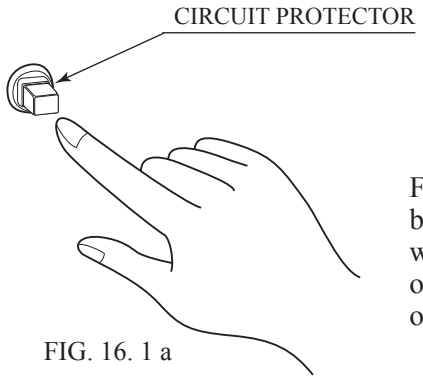

FIG. 16. 1 a

Functions due to the activation of bimetal. To restore the function, wait for approximately one minute or longer until the bimetal cools off. (Press the Button.)

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TABLE 16.1b

PROBLEMS	CAUSE	COUNTERMEASURES
No sound is emitted.	Sound volume adjustment is not appropriate.	Adjust sound volume (see Sec. 9).
	Board and Amplifier malfunctioning	Perform the sound test and confirm (see Sec. 9-2).
Control Unit sighting is not satisfactory.	Sights are not aligned due to changes in the surrounding environment.	Perform sighting adjustment in the test mode (see Sec. 9).
	LED board malfunctioning	Check to ensure that the LED lights up. If it does not light up, replace (see next page).
	Sensor unit malfunctioning	Replace the sensor unit (see Sec. 10).
	LED board and LED board cover are contaminated.	Wipe off soiled surfaces (see Sec. 14 and next page).
	Fuse on the connector board has blown due to a momentary electrical Overload.	Fix the source of the overload, then replace the fuse. <Fuse: 250V 200mA, 514-5086-200> (see Sec. 16)
During game play, the control unit is not operable for shooting.	Microswitch malfunctioning	Check that the switches turn off and on using test mode. Replace the switch if it does not operate (see Sec. 10).
	LED board malfunctioning	Check to ensure that the LED lights up. If does not light up, replace (see next page).
	Sensor board malfunctioning	Replace the sensor board.
	Fuse on the connector board has blown due to a momentary electrical Overload.	Fix the source of the overload, then replace the fuse. <Fuse: 250V 200mA, 514-5086-200> (see Sec. 16)
The operation of the ACTION button and SHOT SELECTOR are unsatisfactory.	Microswitch malfunctioning	Check that the switches turn off and on using test mode. Replace the switch if it does not operate (see Sec. 10).
The gun controller does not vibrate.	Solenoid is broken.	Replace the solenoid (see Sec. 10).
	Fuse on the connector board has blown due to a momentary electrical Overload.	Fix the source of the overload, then replace the fuse. <Fuse: 250V 200mA, 514-5086-200> (see Sec. 16)
The FL does not light up.	The FL has burnt out.	Replace the fluorescent light (see Sec. 14).
The lamp does not light up.	Lamp has burnt out.	Replace the lamp (see Sec.14).
Cannot read properly from an IC card or the IC card is not detected.	Using an unsupported card	Correct the settings using Test mode (see Sec. 9).
	Card reader settings are incorrect.	
	Connector is not connected properly.	Check the operation using Test mode. Check the connector connection.
	IC card unit is dirty.	Clean the IC card unit (see Sec. 11-1).
Cannot insert an IC card.	IC card unit is broken.	Contact your supplier
	Foreign matter has entered the reader/writer.	Clear out the foreigner matter (see Sec. 11-2).

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REPLACING THE LED BD

In case two of LED's do not emit light, failure and malfunctioning may be considered. Replace in the following procedure. When removing surface soils, also use the following procedure.

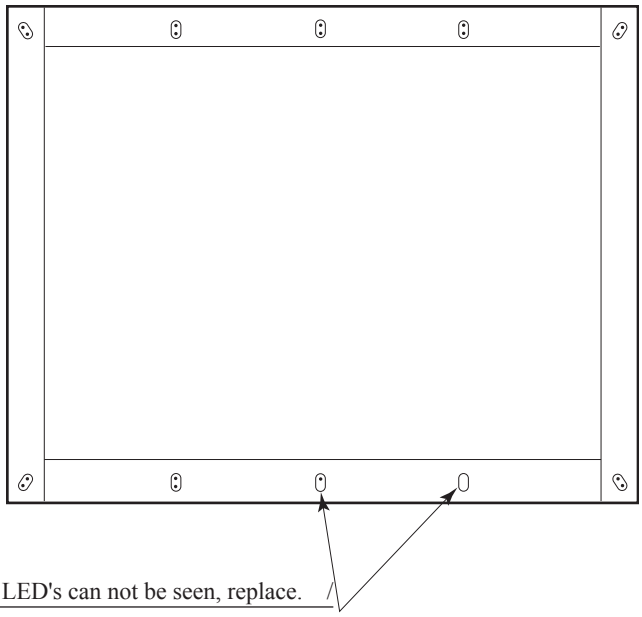

FIG. 16. 1 b

- Turn the power off.
- By referring to 3 , Section 6, demount the PTV from Cabinet DX.
- By referring to 2 , Section 6, remove the Mask from the PTV.
- The Mask has the LED Board. Disconnect the Connectors from both ends of LED Board, remove 2 U Nuts, take out and replace the LED Board. At this time, pay attention to the direction of the LED Board, and install it.
- After replacing the LED Board, be sure to perform sighting check according to the test mode of Section 9.

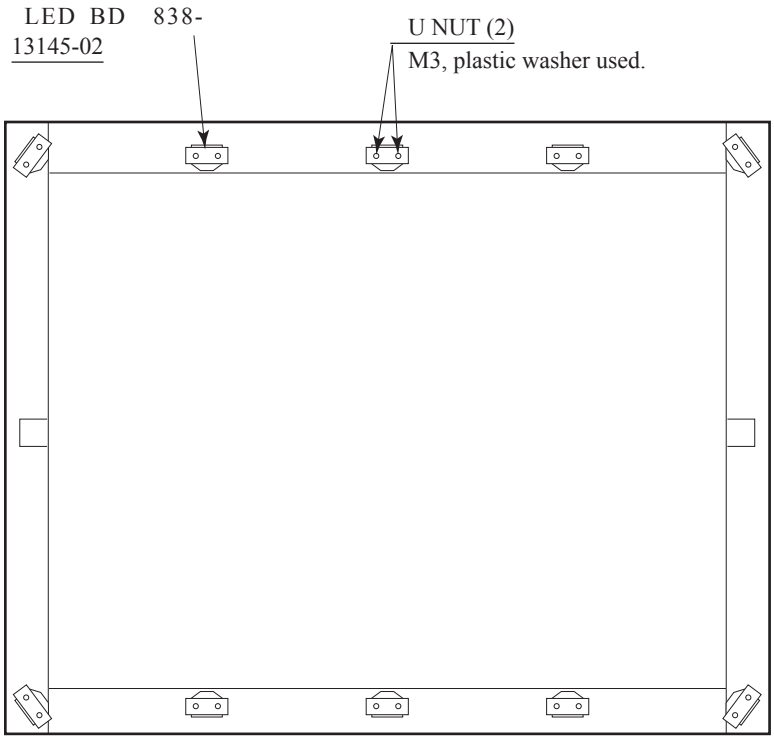

FIG. 16. 1 c

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REPLACING THE FUSE

WARNING!

- Fuse replacements other than those specified can cause accidents and are strictly forbidden. In case fuse replacements other than those stated in this manual are necessary, contact where you purchased the product from for inquiries regarding this matter.
- To prevent accidents due to electrical shock, always turn the power off and disconnect the power plug from the power outlet before performing any task that involves touching the interior of the product.
- Be careful not to damage the wires. Damaged wires may cause electric shock, short circuit or present a risk of fire.
- Be sure to use fuses meeting the specified rating. Using fuses exceeding the specified rating can cause fire and electric shock accidents.
- After eliminating the cause of a blown fuse, replace the fuse. Depending on the cause of the fuse blow, continued use with the blown fuse can cause generation of heat and present a risk of fire.
- There is a risk of burns due to heat of the globe-shaped fluorescent light. Take the appropriate precautions when you are replacing the light.

- Turn the power off.
- Undo the 4 screws using the supplied L-wrench and remove the instruction panel.

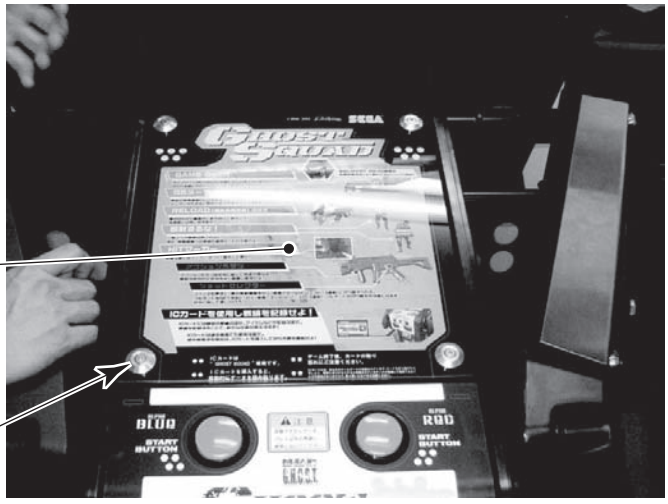

PHOTO 16. 1 a

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● Replace the fuse. There are 200mA (for the sensors) and 2A (for the solenoids) fuses.

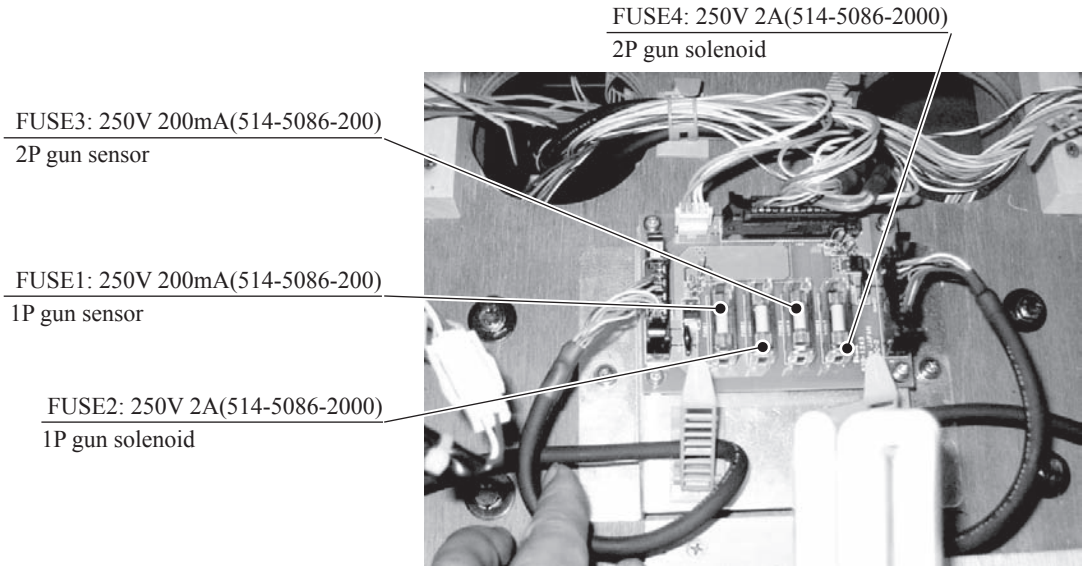

PHOTO 16. 1 b

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WARNING!

- If an error code is displayed, have a Location's Maintenance Man or Serviceman resolve it. If someone without specialized or technical knowledge attempts to rectify the problem, electric shock, short circuits or fire may result. If there is no store maintenance person or technician available, turn the power OFF immediately, and contact your retailer or the office listed in this manual.
- If problems other than those noted in this manual occur, or the countermeasures suggested result in no improvement, do not try to rectify the problem by other means. Turn the power OFF immediately, and contact your retailer or the office listed in this manual. Careless countermeasures can result in unexpected accidents.

STOP
IMPORTANT!

- If error No. 20 is generated, the power must be turned OFF and ON again in order to clear it.
- When requesting replacement or repair of the Game Board or Media Board, put the board in the special purpose packing box specified in this manual for transportation.

Chihiro displays error messages on the screen to indicate various problems.
If an error message is displayed, the game cannot be started. In this case, refer to the following section on causes and countermeasures.
In the text for this product below, "Media Board" and "DIMM" are one and the same.

Error 02

[DISPLAY]	Error 02 Main board malfunctioning.
[CAUSE]	MAIN BOARD is inoperative.
[COUNTERMEASURES]	Verify that the MAIN BOARD is connected properly.

Error 03

[DISPLAY]	Error 03 Bad serial number on main board.
[CAUSE]	Unable to read MAIN BOARD serial ID.
[COUNTERMEASURES]	Disconnect the MEDIA BOARD from the MAIN BOARD and send the MAIN BOARD for repair.

Error 04

[DISPLAY]	Error 04 Bad serial number on media board.
[CAUSE]	Unable to read MEDIA BOARD serial ID.
[COUNTERMEASURES]	With the MEDIA BOARD still attached to the MAIN BOARD, send the Chihiro for repair.

Error 05

[DISPLAY]	Error 05 This game is not acceptable by main board.
[CAUSE]	The game is a foreign edition.
[COUNTERMEASURES]	Use the domestic version of the game.

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Error 11

[DISPLAY]	Error 11 JVS I/O board is not connected to main board.
[CAUSE]	(1) I/O BOARD is not connected. (2) Unreliable connection between MAIN BOARD and I/O BOARD.
[COUNTERMEASURES]	(1) Connect the I/O BOARD to the MAIN BOARD. Verify that the power cable is connected to I/O BOARD. (2) Reconnect or replace the JVS CABLE that connects the I/O BOARD to the MAIN BOARD.

Error 12

[DISPLAY]	Error 12 JVS I/O board does not fulfill the game spec.
[CAUSE]	Correct I/O BOARD is not connected.
[COUNTERMEASURES]	Use an I/O BOARD that provides the proper input/output for the game.

Error 14

[DISPLAY]	Error 14 Network firmware version does not fulfill the game spec.□Required version XX.XX.
[CAUSE]	The firmware version installed on either the NETWORK BOARD or the DIMM MEDIA BOARD is older than the required version.
[COUNTERMEASURES]	Use a NETWORK BOARD or DIMM MEDIA BOARD with□firmware that meets or exceeds the required version.

Error 21

[DISPLAY]	Error 21 This game is not acceptable by main board.
[CAUSE]	Game data loaded from the GD-ROM to the DIMM BOARD is corrupted.
[COUNTERMEASURES]	Verify the GD-ROM DRIVE and Chihiro connection. Check the GD-ROM disc for scratches, dust or dirt.

Error 22

[DISPLAY]	Error 22 Communication error occurred between main board and media board.
[CAUSE]	No response from DIMM BOARD to MAIN BOARD.
[COUNTERMEASURES]	Ensure that the DIMM BOARD and the GD INTERFACE BOARD are properly connected. Should the problem persist, the DIMM BOARD or GD INTERFACE BOARD may be damaged.

Error 23

[DISPLAY]	Error 23 GD-ROM drive cover is open.
[CAUSE]	The GD-ROM DRIVE cover is open.
[COUNTERMEASURES]	Ensure the GD-ROM DRIVE cover is firmly closed.

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Error 24

[DISPLAY]	Error 24 GD-ROM is not found.
[CAUSE]	GD-ROM disc is not found.
[COUNTERMEASURES]	Insert the GD-ROM disc correctly. Verify that the disc is a Chihiro GD-ROM disc. Check the GD-ROM disc for scratches, dust or dirt.

Error 25

[DISPLAY]	Error 25 Cannot access GD-ROM drive.
[CAUSE]	(1) Unable to access GD-ROM DRIVE. (2) The GD-ROM DRIVE cover is open.
[COUNTERMEASURES]	(1) Verify that the GD CABLE and the power cable are properly connected to the GD-ROM DRIVE. (2) Close the GD-ROM cover securely. Should the problem persist, the GD-ROM DRIVE may be damaged.

Error 26

[DISPLAY]	Error 26 Media board malfunctioning.
[CAUSE]	KEY CHIP is not found.
[COUNTERMEASURES]	Attach the proper KEY CHIP for the game. Insert the KEY CHIP securely.

Error 27

[DISPLAY]	Error 27 DIMM memory is not enough.
[CAUSE]	(1) Insufficient DIMM MEMORY on DIMM BOARD. (2) DIMM MEMORY is not connected securely.
[COUNTERMEASURES]	(1) Provide a suitable amount of DIMM MEMORY for the software. (2) Verify that the DIMM MEMORY is connected securely to the DIMM BOARD.

Error 31

[DISPLAY]	Error 31 This game is not acceptable by main board.
[CAUSE]	The game has not been downloaded into the DIMM MEDIA BOARD from the Server (Hub).
[COUNTERMEASURES]	Check the connection between the Server (Hub) and the Chihiro. Make sure that the TEST MODE in the NETWORK SETTING is suitable for the game. Restart the main power first, and then restart the satellite power once the game appears on the main screen. Attach the proper KEY CHIP for the game. Check the internal DIMM BOARD battery is functioning correctly. Should the problem persist, either the network equipment, the DIMM MEDIA BOARD, or the Server (Hub) may be damaged.

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Error 32

[DISPLAY]	Error 32 DIMM memory is not enough.
[CAUSE]	(1) Insufficient DIMM MEMORY on DIMM MEDIA BOARD. (2) DIMM MEMORY is not connected securely.
[COUNTERMEASURES]	(1) Provide a suitable amount of DIMM MEMORY for the software. (2) Verify that the DIMM MEMORY is connected securely to the DIMM BOARD.

Error 33

[DISPLAY]	Error 33 Gateway is not found.
[CAUSE]	The Server (Hub) is not found.
[COUNTERMEASURES]	Check the power of the Server (Hub). Check the NETWORK SETTING for the Chihiro. Attach the proper KEY CHIP for the game. Check the connection between the Server (Hub) and the Chihiro. Should the problem persist, the Server (Hub) may be damaged.

Error 34

[DISPLAY]	Error 34 Gateway cannot be found.
[CAUSE]	No connection to the Server (Hub) at startup.
[COUNTERMEASURES]	Check the connection between the Server (Hub) and the Chihiro.

Caution 51

[DISPLAY]	Caution 51 Wrong video output setting of horizontal scanning frequency.
[CAUSE]	The game does not support horizontal sync frequency setting.
[COUNTERMEASURES]	Change the No. 2-4 and 6-8 DIPSW correcty on the CONNECTOR BOARD. The monitor must support these frequencies. (See "17-2 COMPOSITION OF GAME BOARD".)

Caution 52

[DISPLAY]	Caution 52 Wrong video output setting of horizontal/vertical screen.
[CAUSE]	The game does not support the vertical/horizontal screen settings.
[COUNTERMEASURES]	Change the No. 1 DIPSW on the CONNECTOR BOARD. ON is for vertically placed monitor screens, OFF is for horizontally placed monitor screens. Change the monitor placement from vertical to horizontal or vice versa if necessary. (See "17-2 COMPOSITION OF GAME BOARD".)

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17. GAME BOARD

WARNING

- In order to prevent electric shock and short circuit hazards, be sure to turn power off before performing work.
- Be careful not to damage the wires. Damaged wires may cause electric shock or short circuit or present a fire risk.
- Do not expose the Game BD, etc. without a good reason. Failure to observe this can cause electric shock hazard or malfunctioning.
- Do not use this product with connectors other than those that were connected and used with the Game Board at the time of shipping. Do not carelessly connect wires to connectors that were not used at the time of shipping, as this may cause over-heating, smoke or fire damage.

CAUTION

- In this product, setting changes are made during the test mode. The Game BD need not be operated. Use the Game BD, etc. as is with the same setting made at the time of shipment so as not to cause electric shock and malfunctioning.
- Static electricity from your body may damage some electronics devices on the IC board. Before handling the IC board, touch a grounded metallic surface so that the static electricity can be discharged.

17-1 REMOVING THE GAME BOARD

- Turn the power off.
- Remove the side door R from the main cabinet. Undo the 2 truss screws and open the lock.

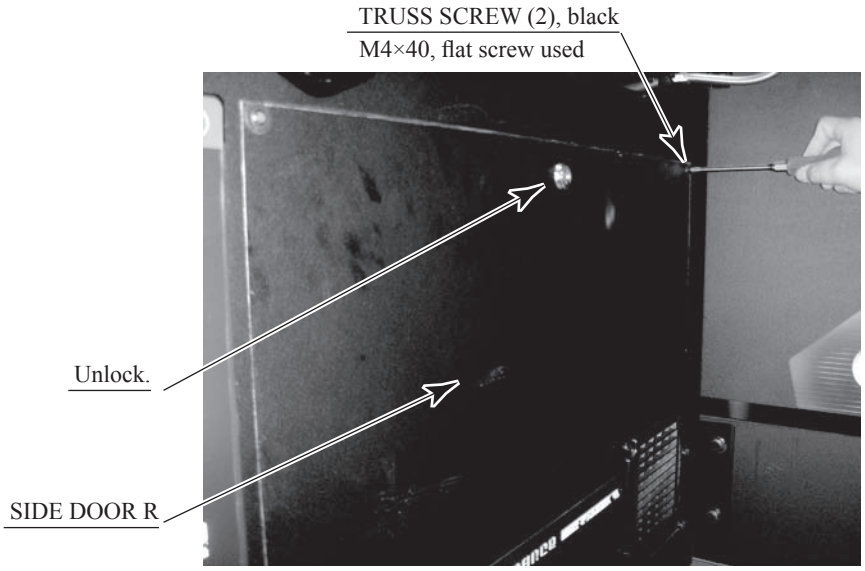

PHOTO 17. 1 a

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● Disconnect the single connector that connects the wires in the cabinet to the ASSY MAIN BD in the main cabinet.

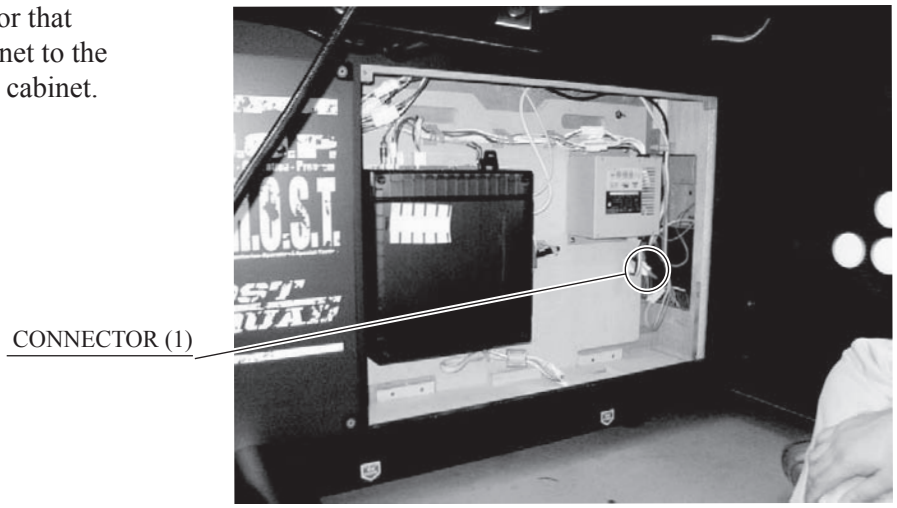

PHOTO 17. 1 b

● Unplug the 3 connectors.

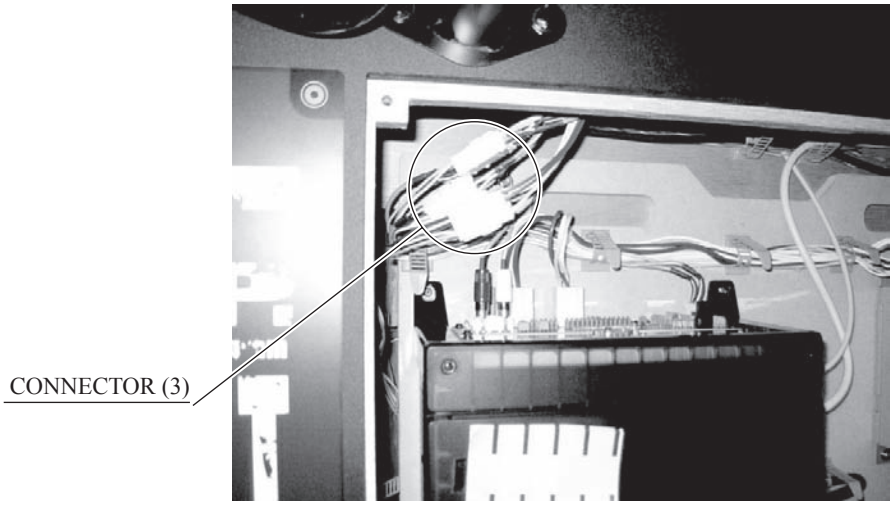

PHOTO 17. 1 c

● Unscrew and remove the screws that fix the left and right sides of the D-SUB connector that connects to the side of the Chihiro board.

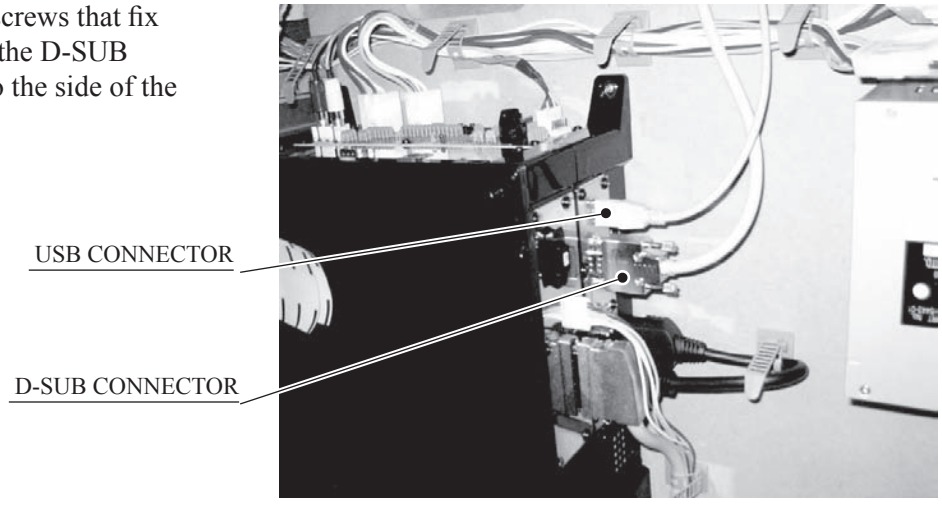

PHOTO 17. 1 d

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● Remove the 2 screws that fix the base (wood) of the ASSY MAIN BD.

WING SCREW
M4×30, flat washer used

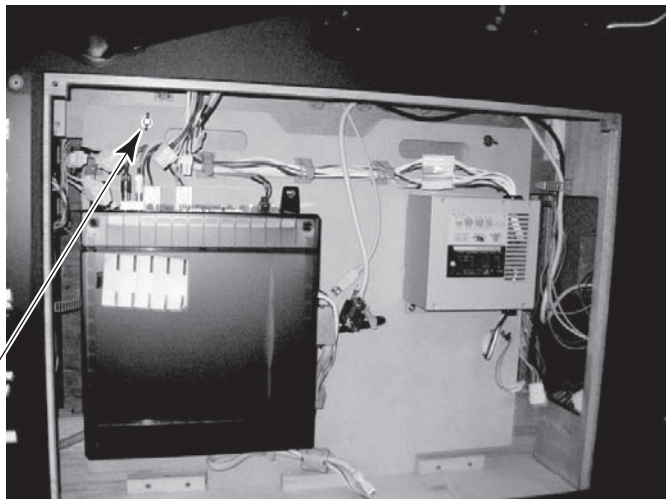

PHOTO 17. 1 e

● Extract the ASSY MAIN BD from the cabinet with the Chihiro Board attached.
At this time, be careful not to damage the wiring.

ASSY MAIN BD

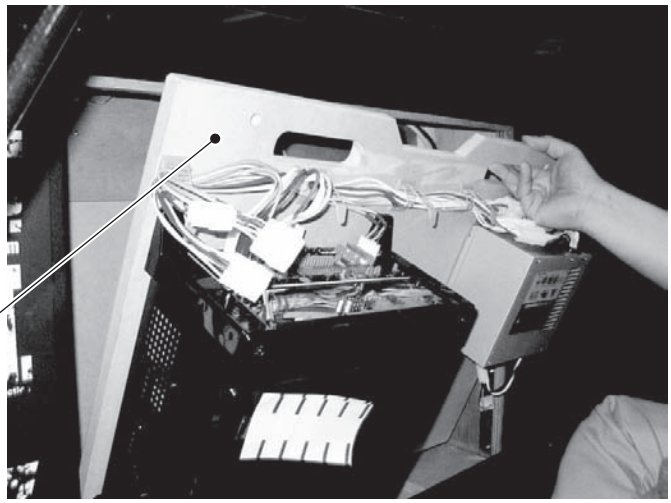

PHOTO 17. 1 f

● Work with the ASSY MAIN BD set on a level surface.

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● Unplug all connectors connected to the Chihiro Board. Unplug the GD Cable connector on the side of the Media Board on the upper part of the Chihiro Board.

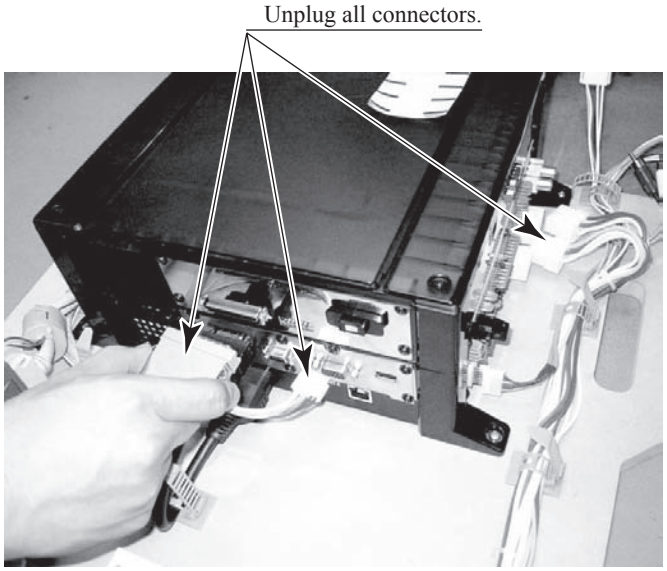

PHOTO 17. 1 g

● Unplug the AVIP Cable connected to the Chihiro Board.
Because the AVIP Cable is packed with it when the Chihiro Board is transported, unfasten the cord clamp that fastens the cable and remove it.

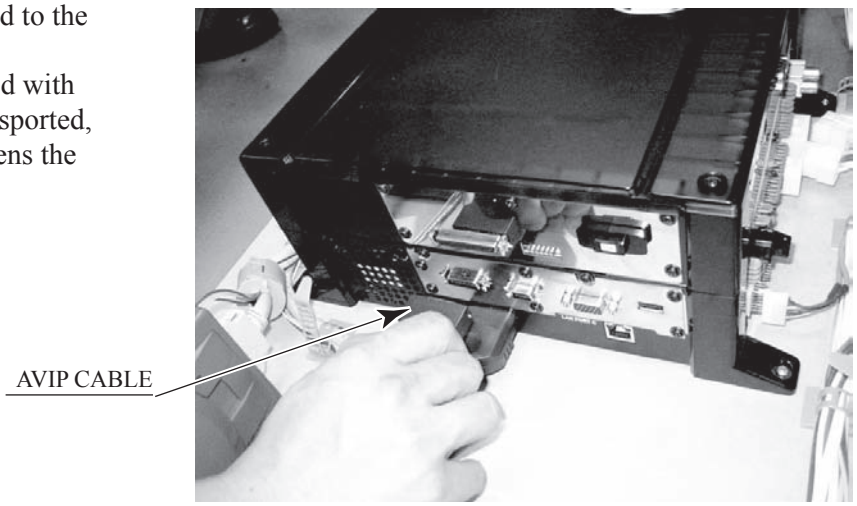

PHOTO 17. 1 h

● Remove the 4 screws and remove the Chihiro Board from the Base.

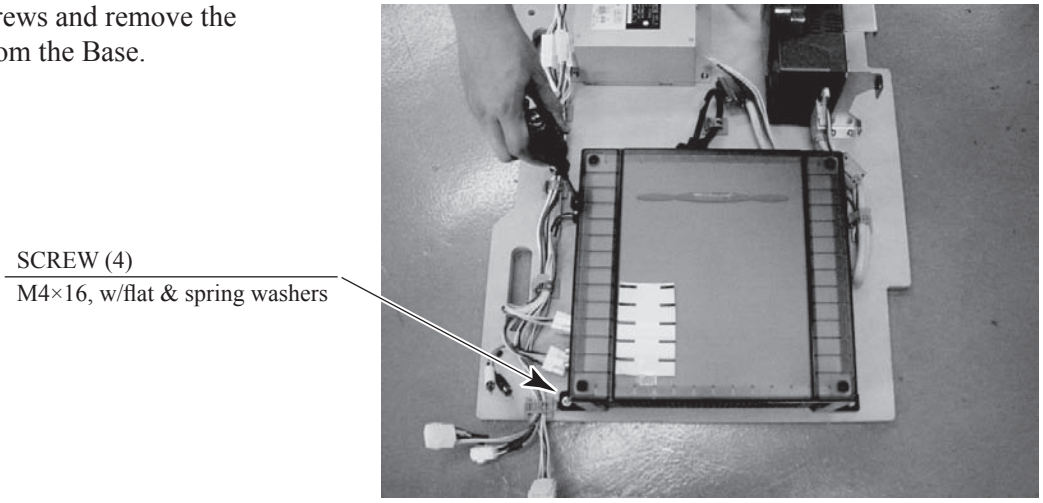

PHOTO 17. 1 i

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REMOVING THE GD-ROM DRIVE

Take out the ASSY MAIN BD from the main cabinet; and then remove the GD-ROM drive from the ASSY MAIN BD as follows:

- Carry out the "Removing the Game Board" procedures and remove the ASSY MAIN BD from the cabinet.
- Remove the GD cable connector and the AC cable connector from the GD-ROM drive.

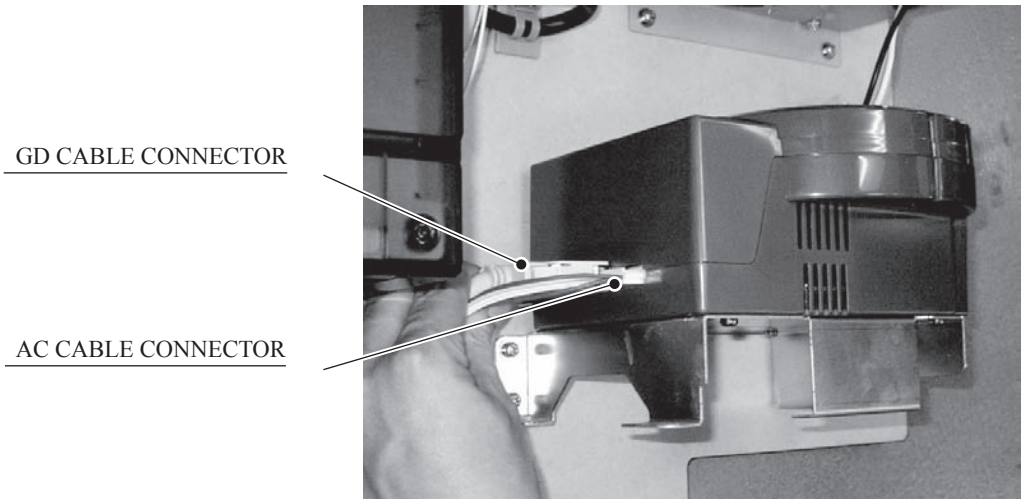

PHOTO 16. 1 j

- Take off the 4 screws to remove the GD-ROM drive.

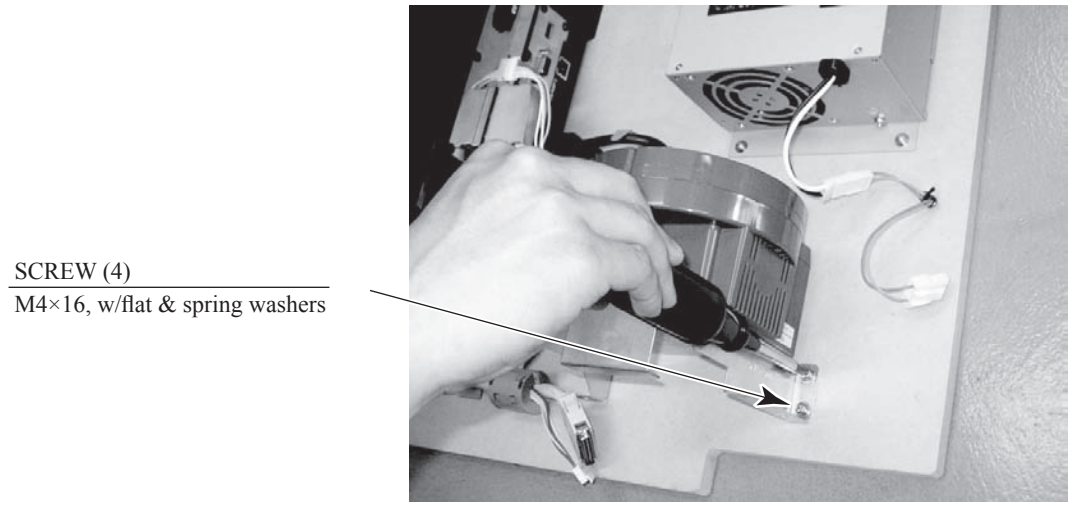

PHOTO 16. 1 k

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17-2 COMPOSITION OF THE GAME BOARD

STOP
IMPORTANT!

Once the Chihiro Board has the Key Chip inserted, it is this product's specialized Game Board.

ASSY CASE BOX CTF EXP(843-0012D-02)

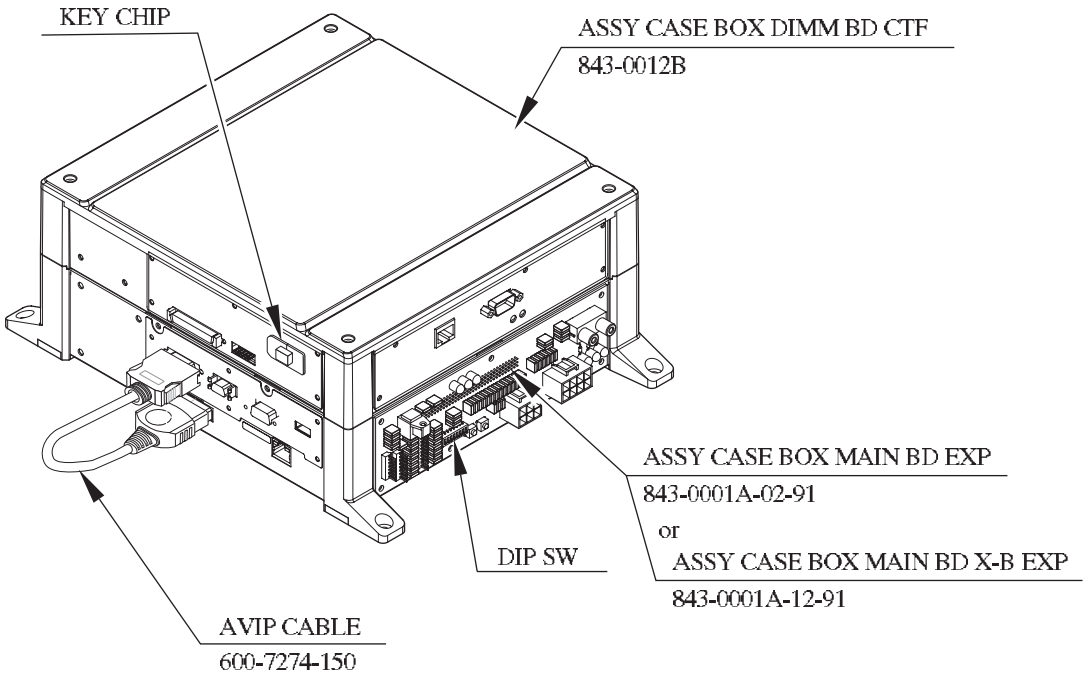

FIG. 17. 2 a

DIP SW SETTING

Use this product with the DIP SW settings shown in the figure below.

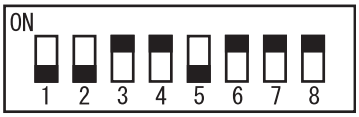

FIG. 17. 2 b

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WARNING!

- To prevent overheating, explosion, or fire:
  - Do not recharge, disassemble, heat, incinerate, or short the battery.
  - Do not allow the battery to come into direct contact with metallic objects or other batteries.
  - To preserve the battery, wrap it in tape or other insulating material.
- Follow local regulations when disposing of the battery.
  Improper disposal can damage the environment.

CAUTION!

To avoid risk of malfunction and damage:
• Make sure the positive and negative ends are aligned correctly.
• Use only batteries approved for use with this unit.

STOP
IMPORTANT!

If an error appears indicating that the battery power is very low within the first year of use, it is usually an indication of a problem or abnormality with something other than the battery. Be sure to inspect the board that the battery is connected to.

- There is a Media Board Button Battery underneath the Media Board.

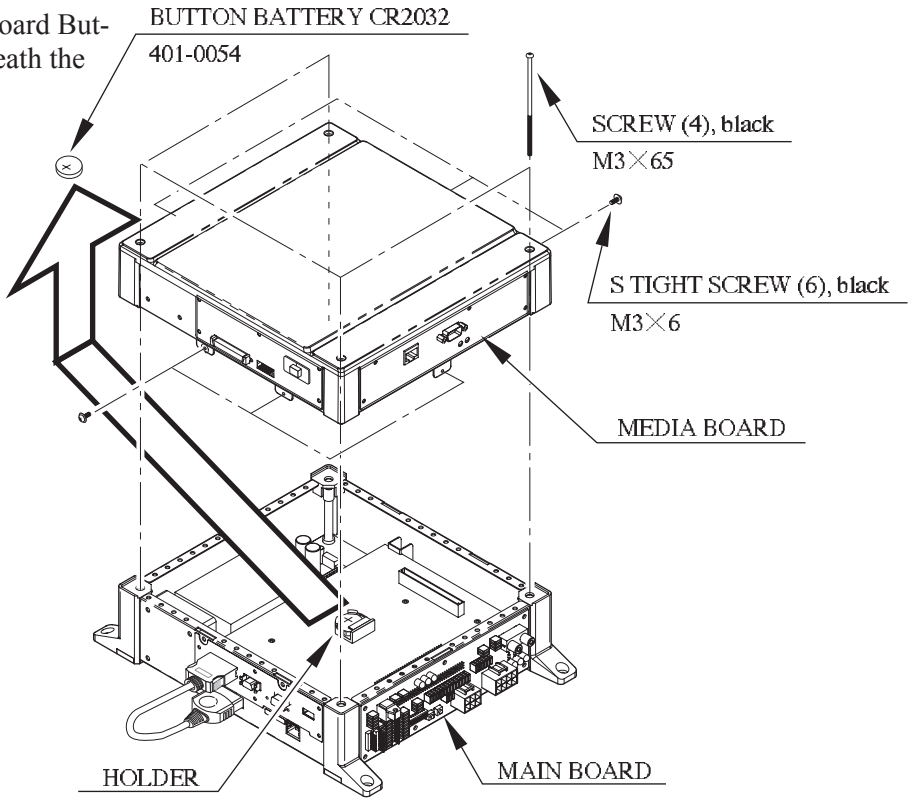

FIG. 17. 3

- Carefully remove the battery from its holder.
- Insert a new battery into the holder with the "+" terminal facing up.

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17-4 REPLACING THE MEDIA BOARD BATTERY PACK

Prohibitions and Cautions to Handle the Battery Pack

Be careful when handling the battery pack.
We bear no responsibility for problems caused by handling clearly contrary to the content of this manual.

- Do not disassemble the battery pack and the batteries.
  If you should fail to observe this instruction, the internal wires and/or protective devices may be damaged; as a result the safety system may not function when discharging and recharging, eventually causing an overheating, fire and explosion. If you should disassemble the batteries, the generated gases may harm your throat and the negative plate may overheat and make a fire.
- Do not make an external short circuit of the battery pack and the batteries.
  If you should fail to observe this instruction, the batteries may overheat, make a fire, and explode.
- Do not fire the battery pack and the batteries.
  If you should fail to observe this instruction, the batteries may make a fire and explode.
  Do not leave the battery pack and the batteries nearby the heat source (fire or heater) or under the intense direct sunlight and flaming sun. If you should fail to observe this instruction, the batteries may reduce the service life and in the worst case may overheat, make a fire, and explode.
- Do not leave the battery pack and the batteries in water or seawater. Also do not apply water or seawater onto the battery pack and the batteries. If you should fail to observe this instruction, the internal wires and/or protective devices may be damaged; as a result the safety system may not function when discharging and recharging, eventually causing an overheating, fire and explosion. Also water may be electrolyzed into oxygen and hydrogen, and eventually the battery's sealed section may be corroded and the internal liquid may leak.
- Do not solder on the battery pack's terminals.
  If you should fail to observe this instruction, the armor may be heated and melted or the internal wires may be damaged, eventually causing an overheating, fire and explosion. Also, when the battery's temperature reaches to 100˚ or more, the battery may leak its internal liquid due to destruction of its plastic parts (gasket, separator, etc.), or may overheat, make a fire, or explode due to internal short-circuit.
- Do not insert or connect the battery in a reversal polarity.
  If you should fail to observe this instruction, the battery may be externally short-circuited and eventually overheat, make a fire, or explode, depending on the device you connect with.

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- Do not tightly seal the battery pack when installing it onto an external device. Flammable gas is generated from the battery when its safety mechanism has functioned. If you should fail to observe the above-described instruction, sparks from motors, switches, etc. may cause the gas to fire. Therefore, install the battery pack so that the gas can be quickly released from the external device.
- Do not use the battery pack for the device/usage other than this game system. If you should fail to observe this instruction, the battery and/or the device may be damaged due to non-applicable specifications.
- Do not strike a nail in, hammer, step on, or apply any other forms of pressures and shocks on, the battery.
  If you should fail to observe this instruction, the battery may be deformed. As a result, the battery may burst at its sealed sections to leak the internal liquid, or may be short-circuited internally to overheat, make a fire, and explode.
- Do not use a battery charger because any battery charger is not usable for this battery pack.
  If you should fail to observe this instruction, the gas may be suddenly generated in the battery and eventually the battery may overheat, make a fire or explode.
- If the battery in use or in keeping shows an abnormal indication (deformation, change of color, bursting of the armor cover, etc.), immediately stop using or keeping it. If it leaks and smells abnormally, immediately keep it away from fire and put it in a safety box.
- If the liquid leaks from the battery and gets in your eyes, do not rub your eyes but immediately wash them with clean water (city water etc.); and consult a medical doctor for a treatment. If you should fail to observe this instruction, the liquid may harm your eyes.
- The battery pack armor (a polyvinyl chloride tube) may be damaged or deformed by external force or heat. When transporting the battery pack or replacing it with a new one, therefore, be careful not to drop or excessively shock it. Do not continue to use any damaged or deformed battery pack. If you should fail to observe this instruction, the battery may overheat, make a fore, or explode.
- The battery pack contains a printed circuit board (PCB) for protective circuitry. It may be destroyed by the static electricity. When handling or servicing the battery pack, therefore, take preventive measures against the static electricity.
  If your battery pack has shown destruction of a protective circuitry PCB, do not continue to use it. If you should fail to observe this instruction, the battery may overheat, make a fore, or explode.
- When wiring the battery pack to a device, be careful not to apply excessive force onto the connectors and lead wires. The battery may overheat, make a fire, or explode if the connectors and lead wires are damaged.
- Do not do away with the used battery packs carelessly because they may contaminate the environment. Be sure to dispose of the used battery packs in accordance with the laws/regulations of your country.

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If the GD-ROM read time becomes excessively long, it is likely that the Media Board battery pack life if running low.
No battery pack charger is available.
Follow the procedure to replace the battery pack.

- Remove 4 screws from the upper face of the board.
- Remove the top cover.
- Remove 1 tapping screw and remove the cover battery holder.
- Disconnect the connector at the end of the wire coming out of the battery pack. Remove by pressing the projection on the connector and pulling.
- Securely connect the new battery pack.
- Attach the cover battery holder and top cover.

Submit the used battery packs to an industrial waste disposal plant. Thus they must be disposed according to the local laws and the regulations in your country.

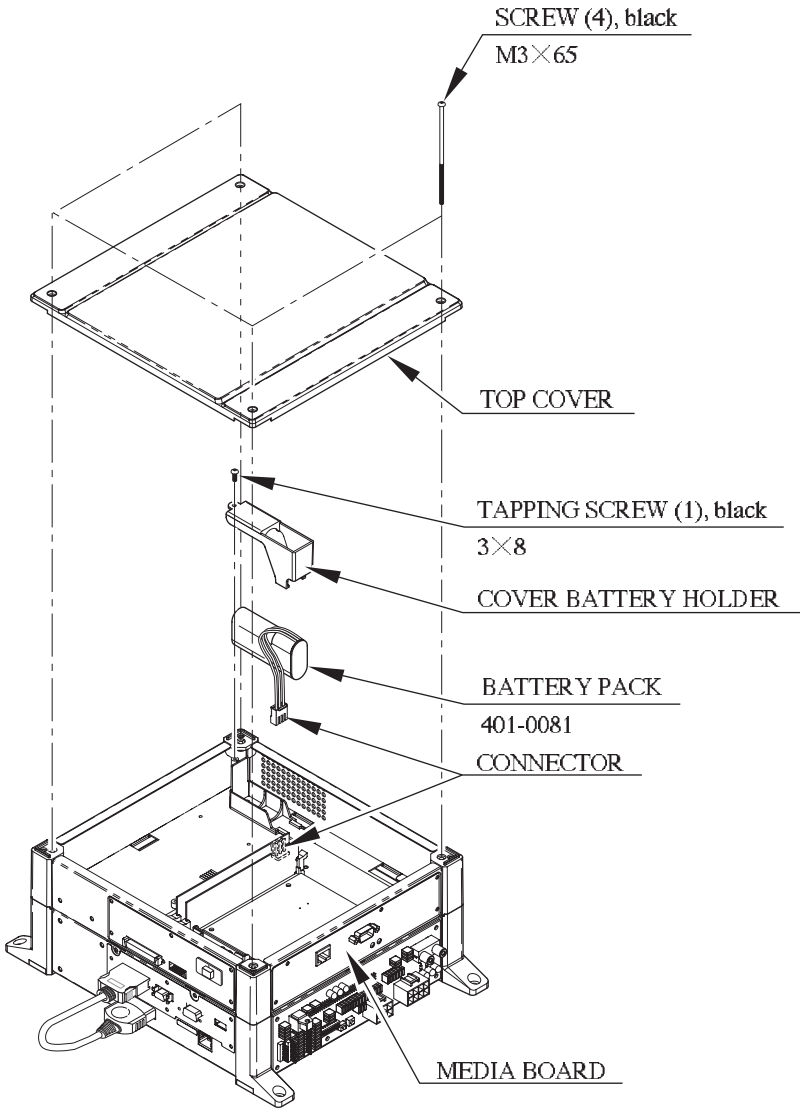

FIG. 17. 4

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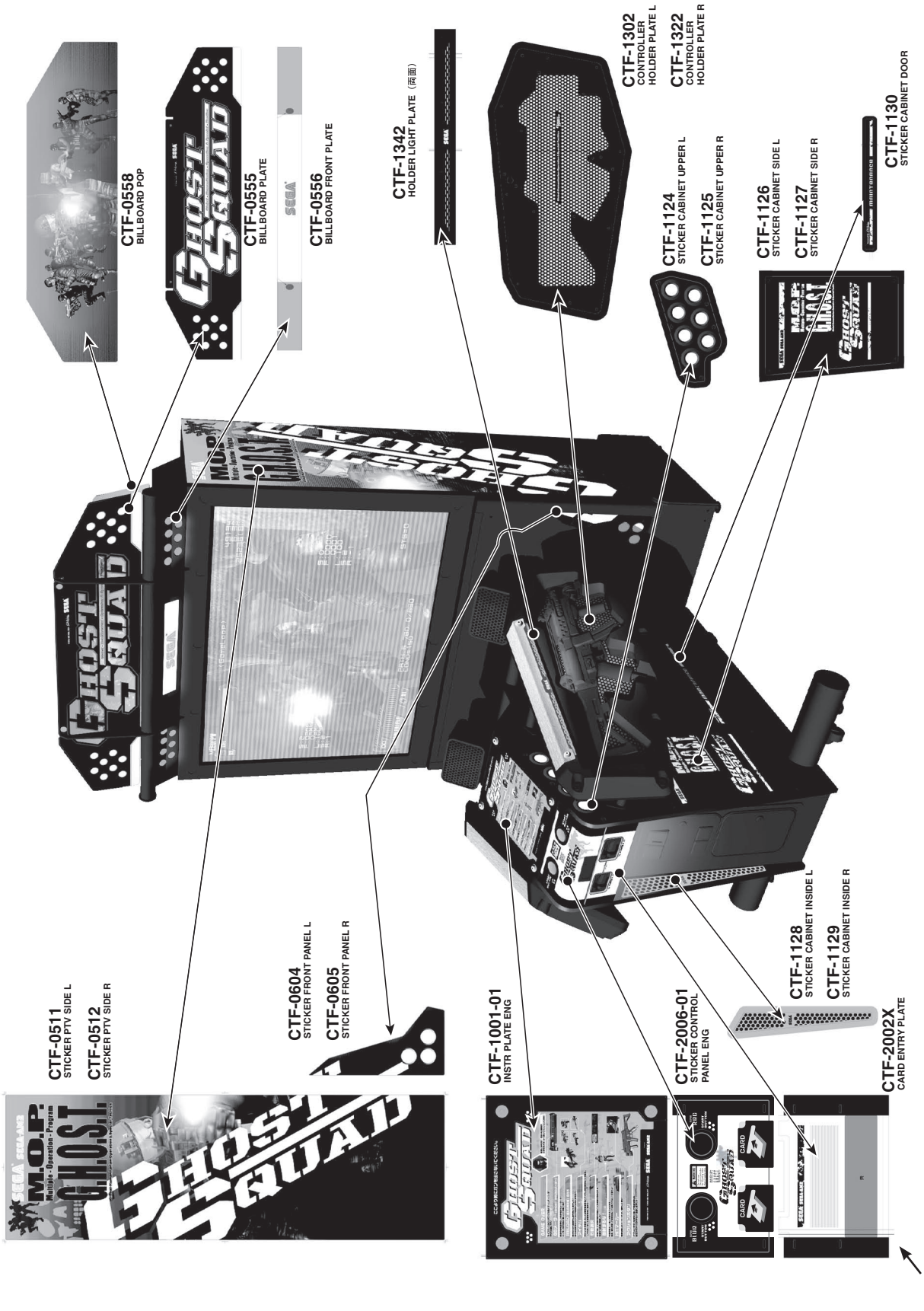
18. DESIGN RELATED PARTS

For the Warning Display stickers, refer to Section 1.



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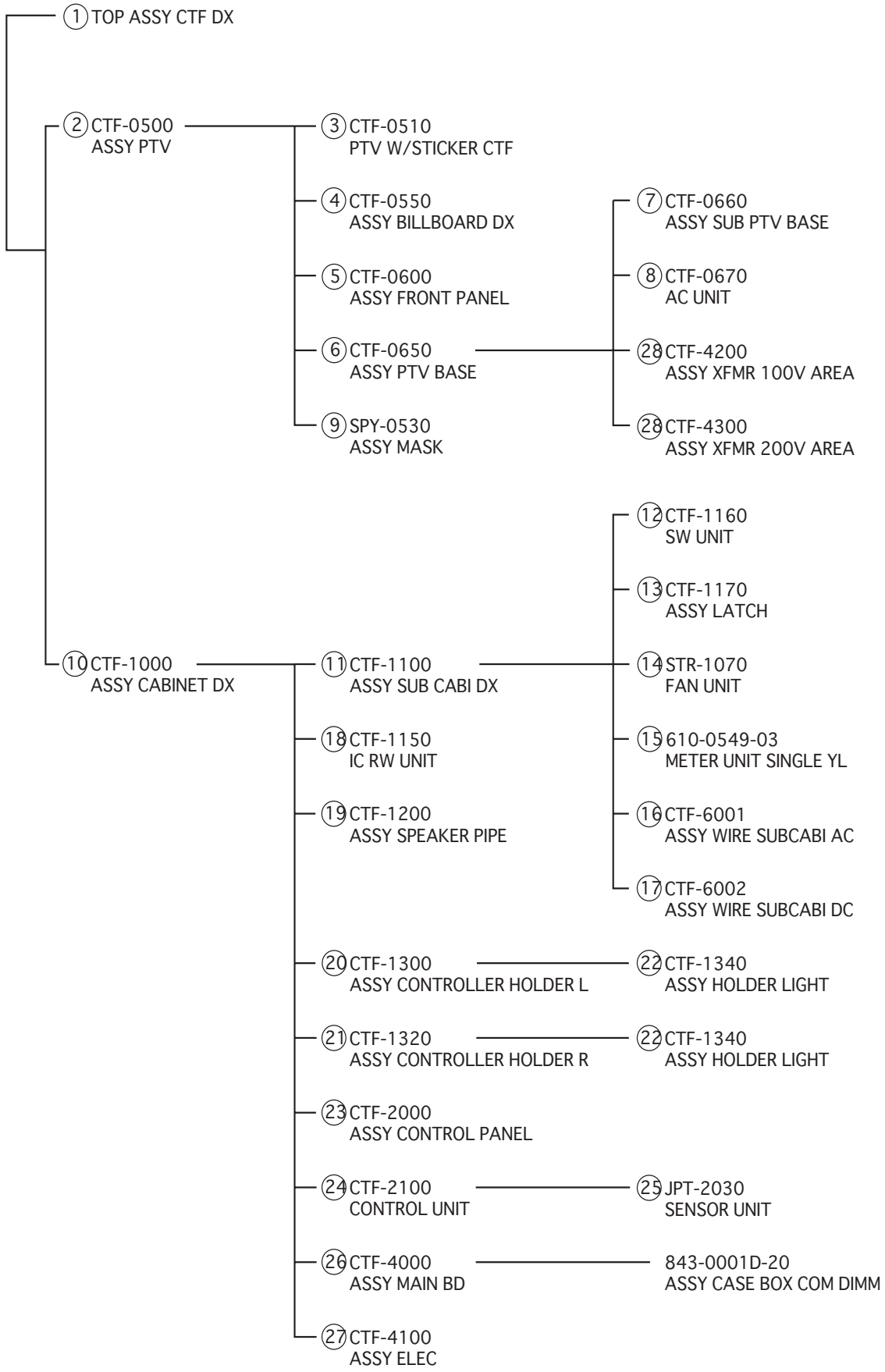
19. DESIGN RELATED PARTS



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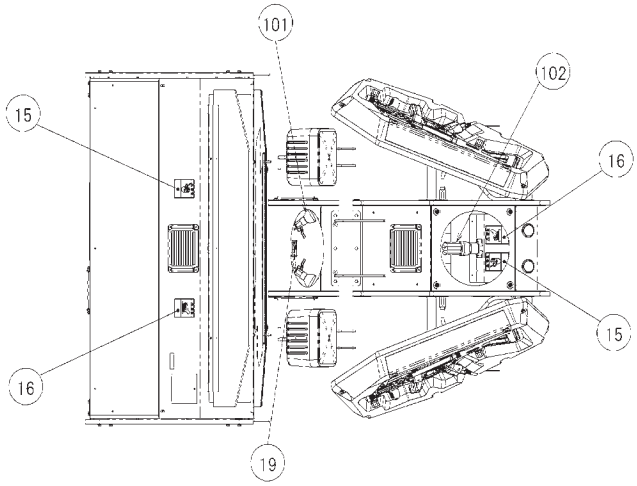
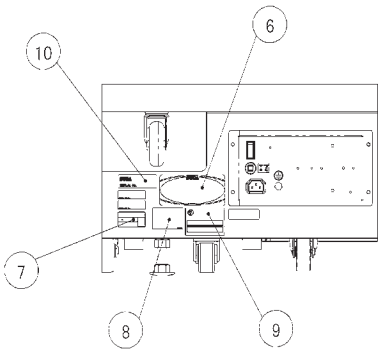
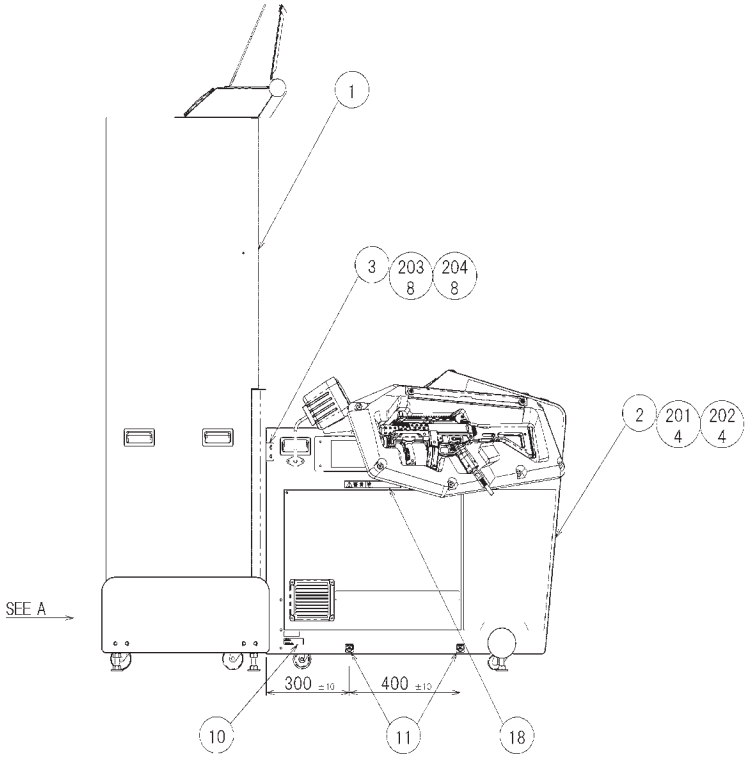
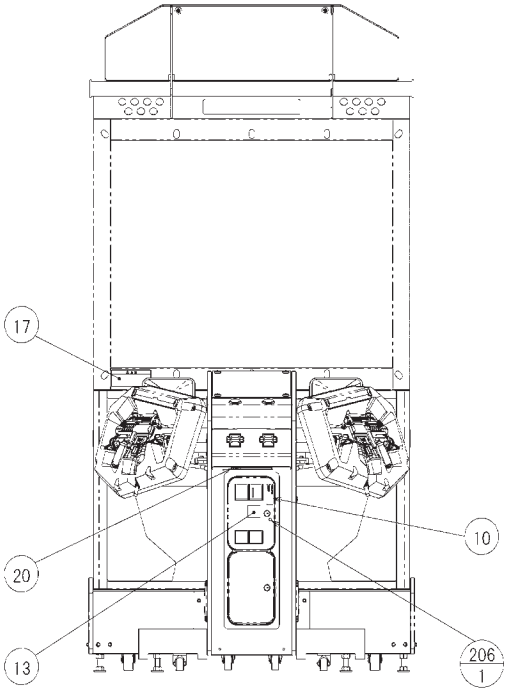




Details: A





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TOP ASSY CTF DX (D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-0500	ASSY PTV	
2	CTF-1000	ASSY CABINET DX	
3	CTF-0001	JOINT BRKT UPPER	
11	421-11416	STICKER CAUTION FORK	
12	421-8479-01	STICKER INSTR SUNLIGHT ENG	
15	440-WS0002XEG	STICKER W POWER OFF ENG	
16	440-WS0012XEG	STICKER W HIGH TEMP ENG	
17	440-CS0175-EG	STICKER C EPILEPSY ENG	
18	440-WS0143-EG	STICKER W POWER OFF WIDE ENG	
19	440-WS0293EG	STICKER W MARK ENG	
20	440-CS0297-EG	STICKER C DOOR PINCH CTF ENG	
21	CTF-0002-01	INSTR TRANSPORT CTF DX ENG	
101	390-6772	HALOGEN LAMP 110V	
102	390-6782	FL LAMP EFD15ED/13 TOSHIBA	
201	030-000840-SB	HEX BLT W/S BLK M8X40	
202	068-852216-0B	FLT WSHR BLK 8.5-22X1.6	
203	000-T00520-0B	M SCR TH BLK M5X20	
204	068-552016-0B	FLT WSHR BLK 5.5-20X1.6	
206	008-T00412-0B	TMP PRF SCR TH BLK M4X12	
401	420-6831-01	OWNERS MANUAL CTF DX ENG	
403	509-5080	SW MICRO TYPE (SS-5GL2)	
404	600-6618	AC CABLE CONNECT TYPE FOR EXP	<OTHERS>
406	220-5576	KEY MASTER FOR 220-5575	
407	280-5009-01	CORD CLAMP 21	
409	105-5435	GD DRIVE BRKT STD	
410	000-P00416-W	M SCR PH W/FS M4X16	
411	012-P00408	TAP SCR #2 PH 4X8	
412	610-0653-0012	GD SOFT KIT CTF	
413	540-0043-91	L-WRENCH FOR HEX SOC 3MM	
414	443-30012B	STICKER 843-0012B	
415	443-30012D-02	STICKER 843-0012D-02	
417	514-5086-200	FUSE S.B 200MA 250 HBC CE	
418	514-5086-2000	FUSE S.B 2000MA 250V HBC CE	
/	105-5356	SHIPPING BRKT	
/	421-8740	CAUTION INSTR COP U/R	
/	030-000625-S	HEX BLT W/S M6X25	
/	068-652016	FL;T WSHR 6.5-20X1.6	
/	421-6690-06	STICKER 110V	<AC 110V AREA>

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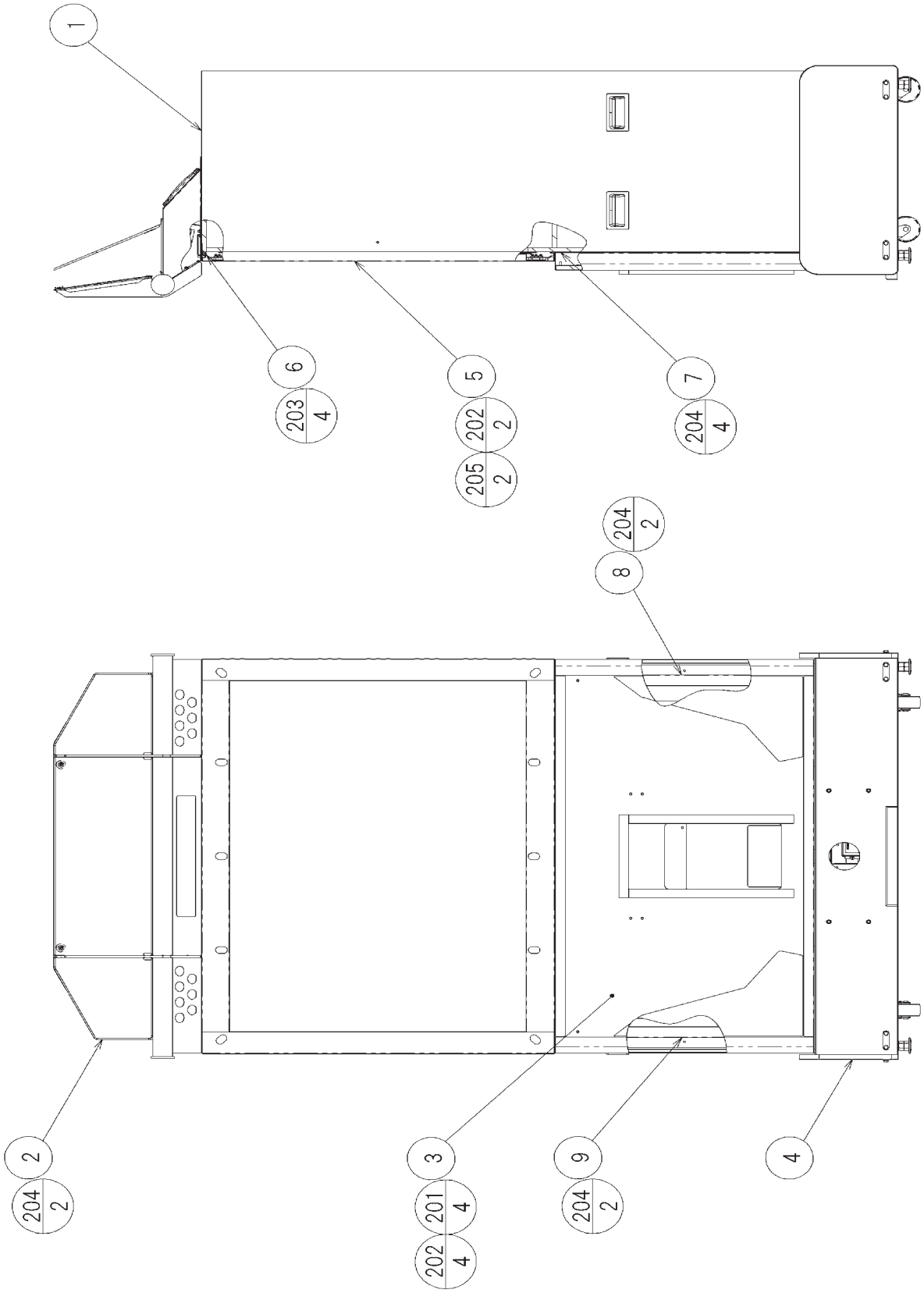

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ASSY PTV (CTF-0500) (D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-0510	PTV W/STICKER CTF	
2	CTF-0550	ASSY BILLBOARD DX	
3	CTF-0600	ASSY FRONT PANEL	
4	CTF-0650	ASSY PTV BASE	
5	SPY-0530	ASSY MASK	
6	FRQ-1114	MASK BRKT LOWER	
7	SMB-1501	MASK BRKT LOWER	
8	DYN-0501	PANEL MOUNT BRKT L	
9	DYN-0502	PANEL MOUNT BRKT R	
201	000-T00520-0B	M SCR TH BLK M5X20	
202	068-552016-0B	FLT WSHR BLK 5.5-20X1.6	
203	000-F00412	M SCR FH M4X12	
204	000-P00516-WB	M SCR PH W/FS BLK M5X25	
205	000-T00525-0B	M SCR TH BLK M5X25	

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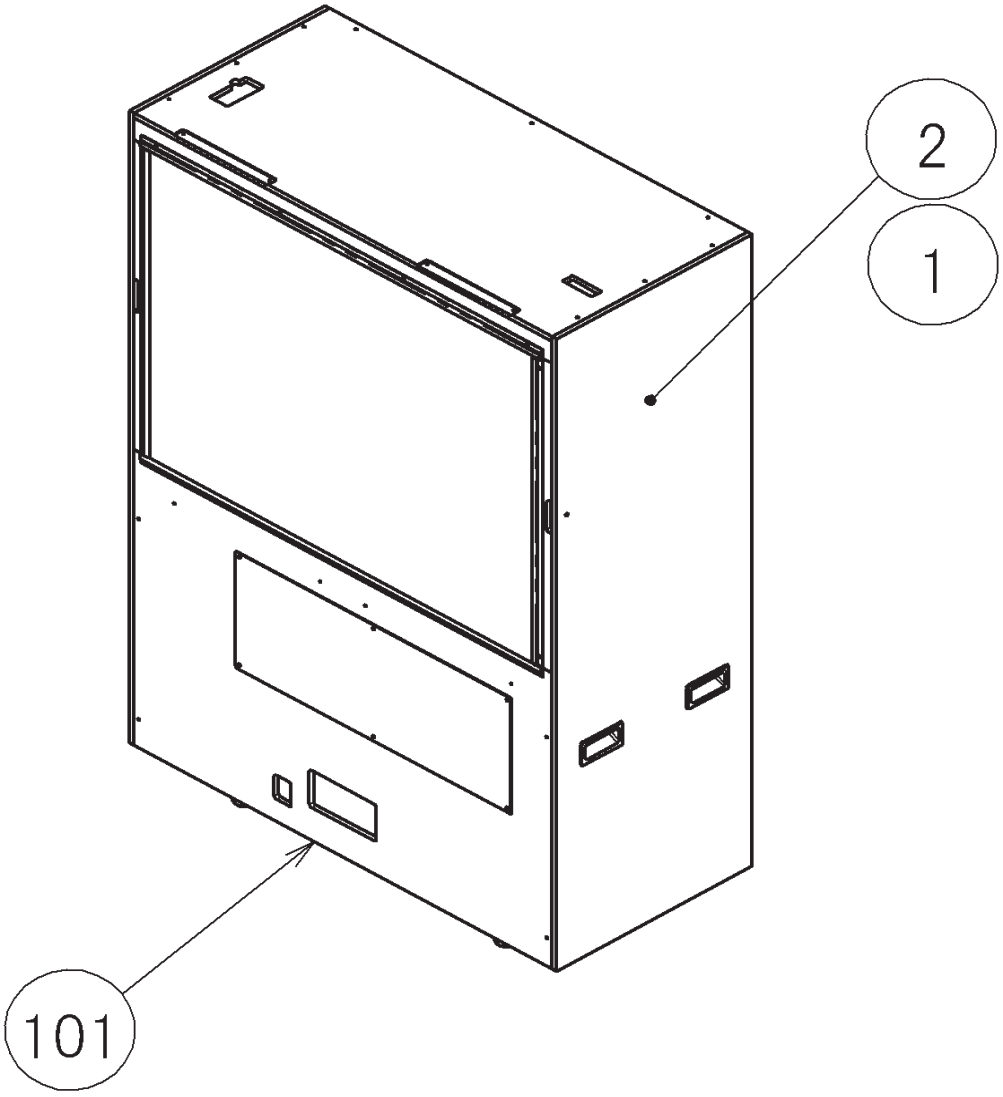
PTV W/STICKER CTF (CTF-0510)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-0511	STICKER PTV SIDE L	
2	CTF-0512	STICKER PTV SIDE R	
101	200-5788-31	PROJECTION DSPL T 50 TYPE 31K	

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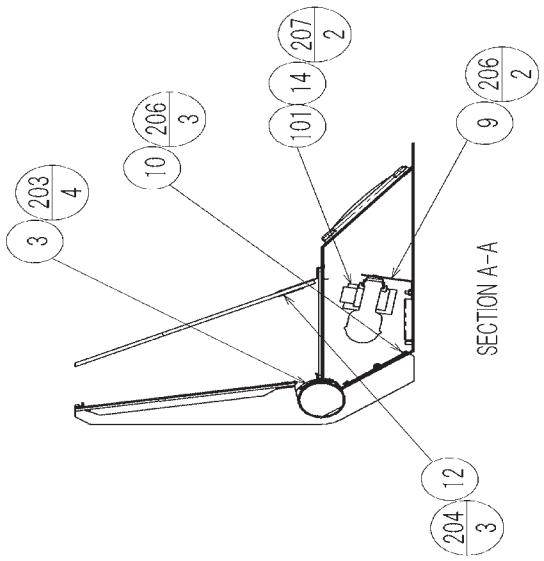

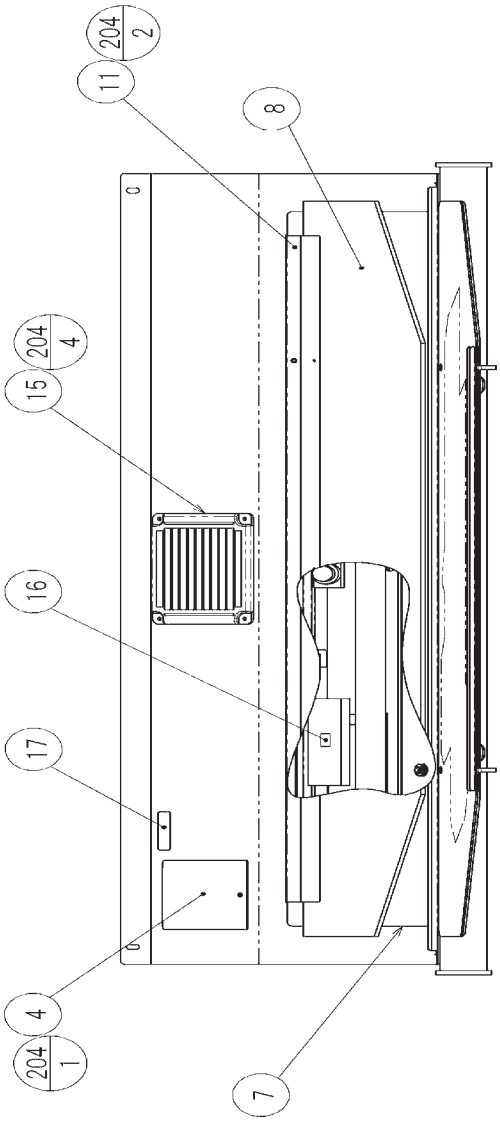

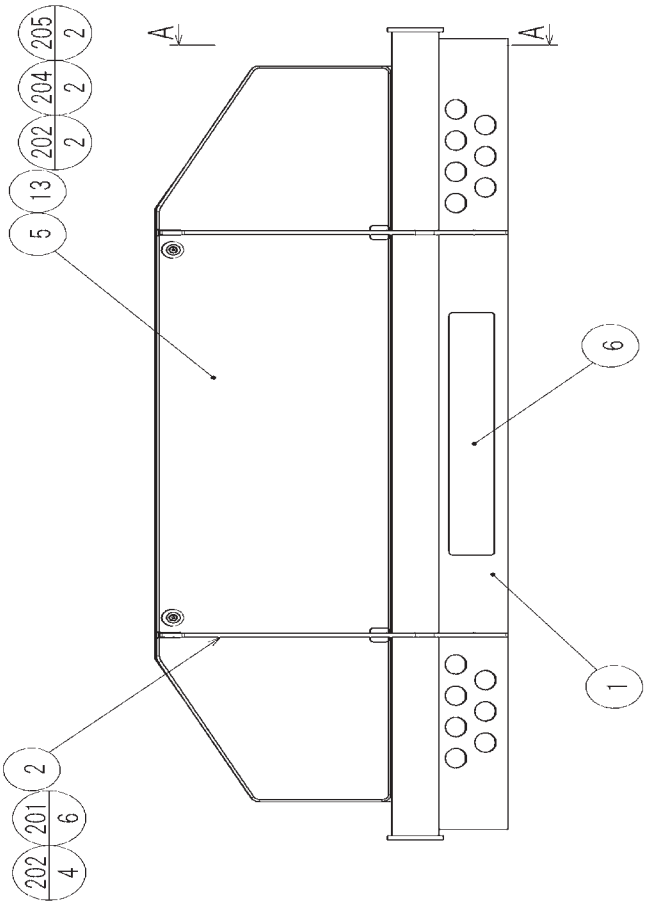

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ASSY BILLBOARD DX (CTF-0500) (D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-0551	BILLBOARD BOX	
2	CTF-0552	BILLBOARD STAY	
3	CTF-0553	BILLBOARD STAY HOLDER	
4	CTF-0554	CONNECTOR LID	
5	CTF-0555	BILLBOARD PLATE	
6	CTF-0556	BILLBOARD FRONT PLATE	
7	CTF-0557	BILLBOARD LID	
8	CTF-0558	BILLBOARD POP	
9	CTF-0559	BILLBOARD FL BRKT	
10	CTF-0561	FRONT PLATE SASH	
11	CTF-0562	POP BRKT	
12	CTF-0562	POP HOLDER	
13	CTF-1002	WASHER CTF	
14	253-5457	FL HOLDER	
15	253-5460-01	AIR VENT BLACK	
16	421-7501-18	STICKER FL32W	
101	390-6659-32EX	ASSY FL32W EX W/CONN HIGH S CE	
101	390-6603-32EX	ASSY FL32W EX W/CONN HIGH T CE	
102	280-5009-01	CORD CLAMP 21	
201	000-P00410-WB	M SCR PH BLK W/FS M4X10	
202	068-441616-0B	FLT WSHR BLK 4.4-16X1.6	
203	000-F00408	M SCR FH M4X8	
204	000-T00408-0B	M SCR TH BLK M4X8	
205	FAS-290038	HEX SKT LH CAP SCR STN M5X10	
206	050-F00400	FLG NUT M4	
207	000-P00430-W	M SCR PH W/FS M4X30	
301	CTF-60035	WH FL BILLBOARD	

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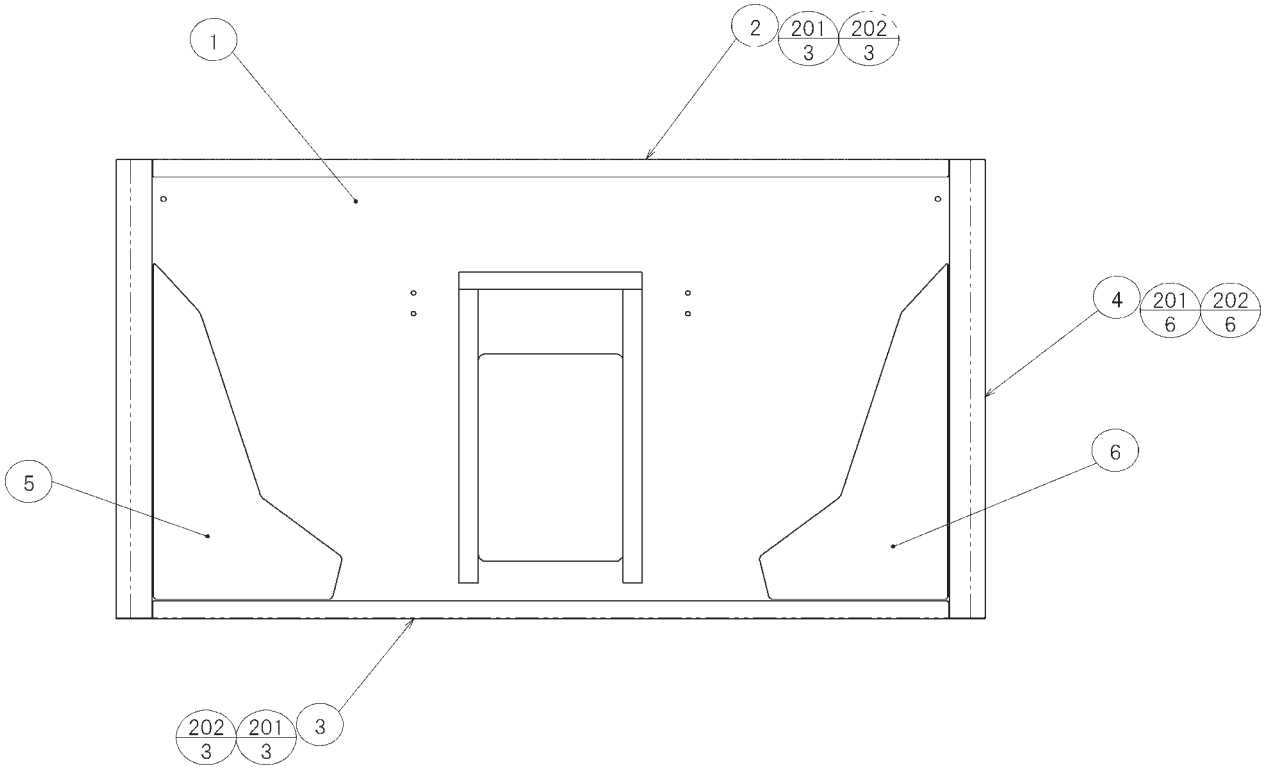
ASSY FRONT PANEL (CTF-0600)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-0601	FRONT PANAL	
2	CTF-0602	PANEL BRKT UPPER	
3	CTF-0603	PANEL BRKT LOWER	
4	EZT-0603	SIDE BRKT	
5	CTF-0604	STICKER FRONT PANEL L	
6	CTF-0605	STICKER FRONT PANEL R	
201	050-F00500	FLG NUT M5	
202	068-552016	FLT WSHR 5.5-20X1.6	

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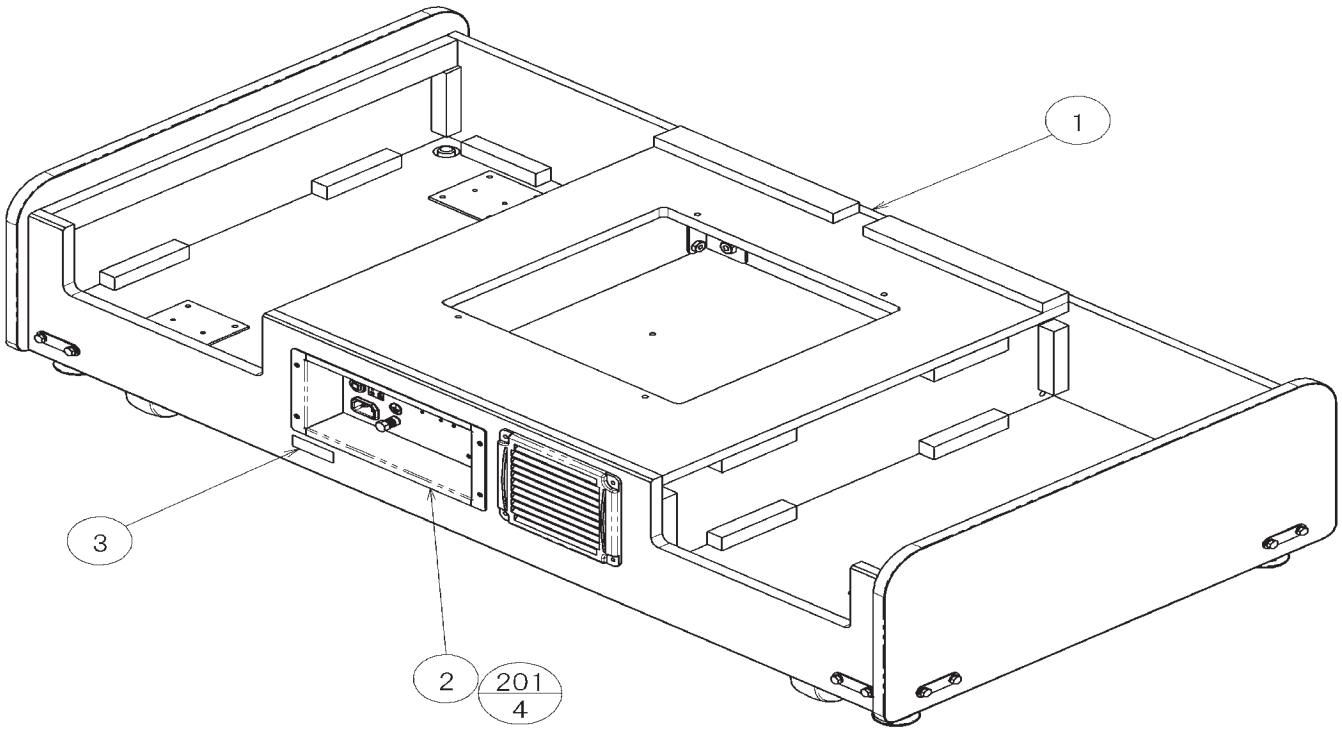
ASSY PTV BASE (CTF-0650)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-0660	ASST SYB PTV BASE	
2	CTF-0670	AC UNIT	
201	000-T00420-0B	M SCR TH BLK M4X20	
/	000-P00430-S	M SCR PH W/S M4X20	
/	068-441616	FLT WSHR 4.4-16X1.6	
/	CTF-4200	ASSY XFMR 100V AREA	<AC 110-120V AREA>

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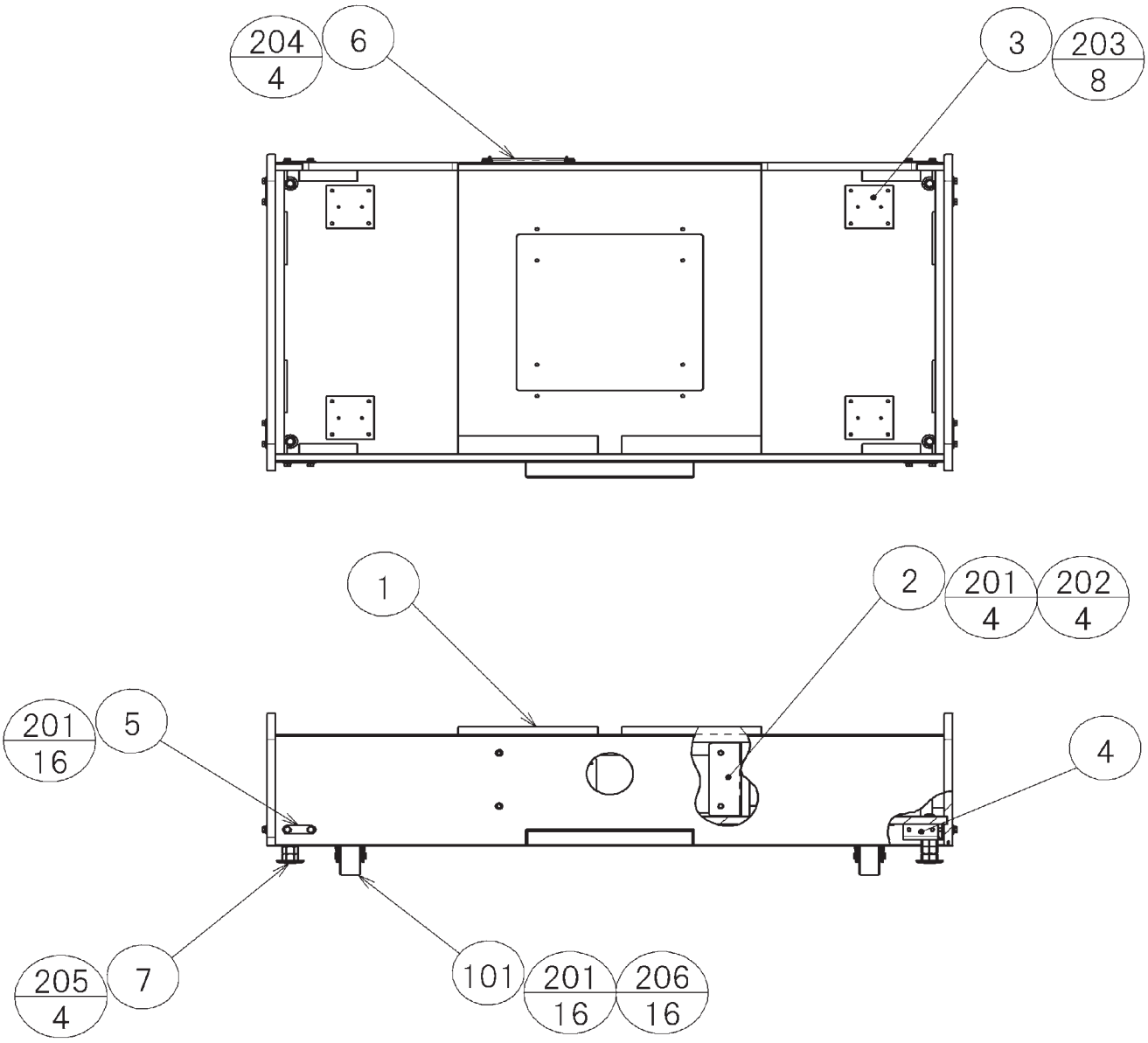
ASSY SUB PTV BASE (CTF-0660) (D-1/2)



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ASSY SUB PTV BASE (CTF-0660) (D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-0661	PTV BASE	
2	CTF-0662	BASE NUT BRKT	
3	SCR-1008	NUT PLATE FOR CASTER	
4	ARC-1006	LEG BRACKET	
5	117-5233	PLATE LEG BRACKET BLACK	
6	253-5460-01	AIR VENT BLACK	
7	601-5699X	LEG ADJUSTER BOLT M16X75	
101	601-6224	CASTER 75	
101	601-9377	CASTER FAI=75	
102	280-5009-01	CORD CLAMP 21	
201	030-000630-SB	HEX BLT BLK W/S M6X30	
202	068-652016	FLT WSHR 6.5-20X1.6	
203	011-T03512	TAP SCR TH 3.5X12	
204	000-T00420-0B	M SCR TH BLK M4X20	
205	050-H01600-0B	HEX NUT BLK M16	
206	060-F00600	FLT WSHR M6	
207	011-F00312	TAP SCR #1 FH 3X12	

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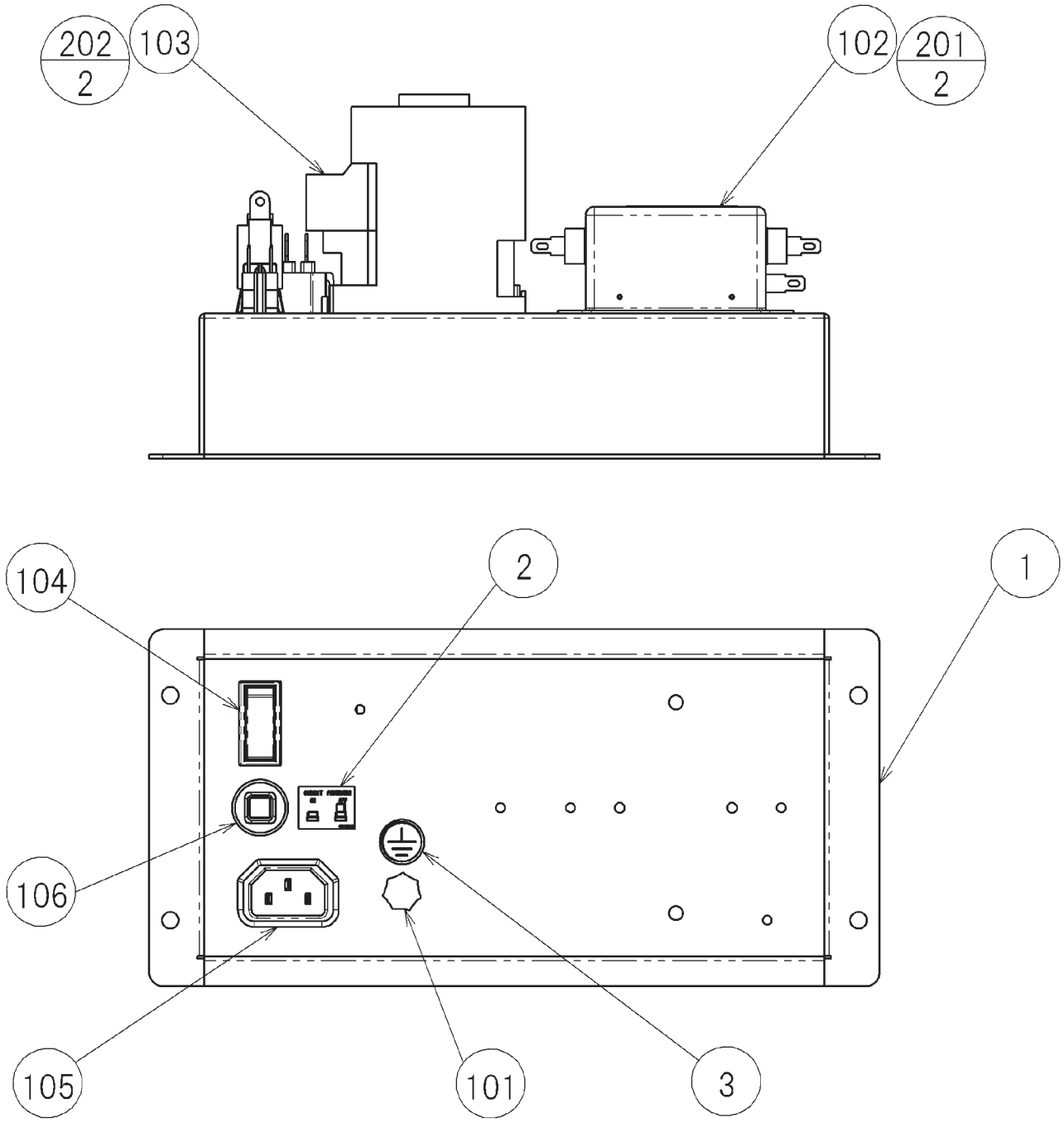
ASSY SUB PTV BASE (CTF-0670) (D-1/2)



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ASSY SUB PTV BASE (CTF-0670) (D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	FZR-1051	AC BRKT	
2	421-7468-02	STICKER C.P W/PIC	
3	421-8202	STICKER EARTH MARK	
102	270-5115	NOISE FILTER 15A GT-215J	
103	450-5134	MAGNET CONTACT S-NIOCX 230V	<OTHERS>
104	509-5453-91-V-B	SW ROCKER J8 V-B	
105	214-0202	AC INLET PANEL TYPE	
106	512-5046-8000	C.P 8000MA CE UL	<AC 110-220V AREA>
107	310-5029-G20	SUMITUBE F G 20MM	
108	310-5029-F20	SUMITUBE F F 20MM	
109	280-5009-01	CORD CLAMP 21	
201	000-P00408-W	M SCR PH W/FS M4X8	
202	000-P00416-W	M SCR PH W/FS M4X16	
203	050-H00400	HEX NUT M4	
204	060-F00400	FLT WSHR M4	
205	060-S00400	SPR WSHR M4	
301	CTF-60001	WH AC IN	
302	CTF-60002	WH CONN J8	
303	CTF-60003	WH FILTER IN	
304	CTF-60004	WH FILTER OUT	

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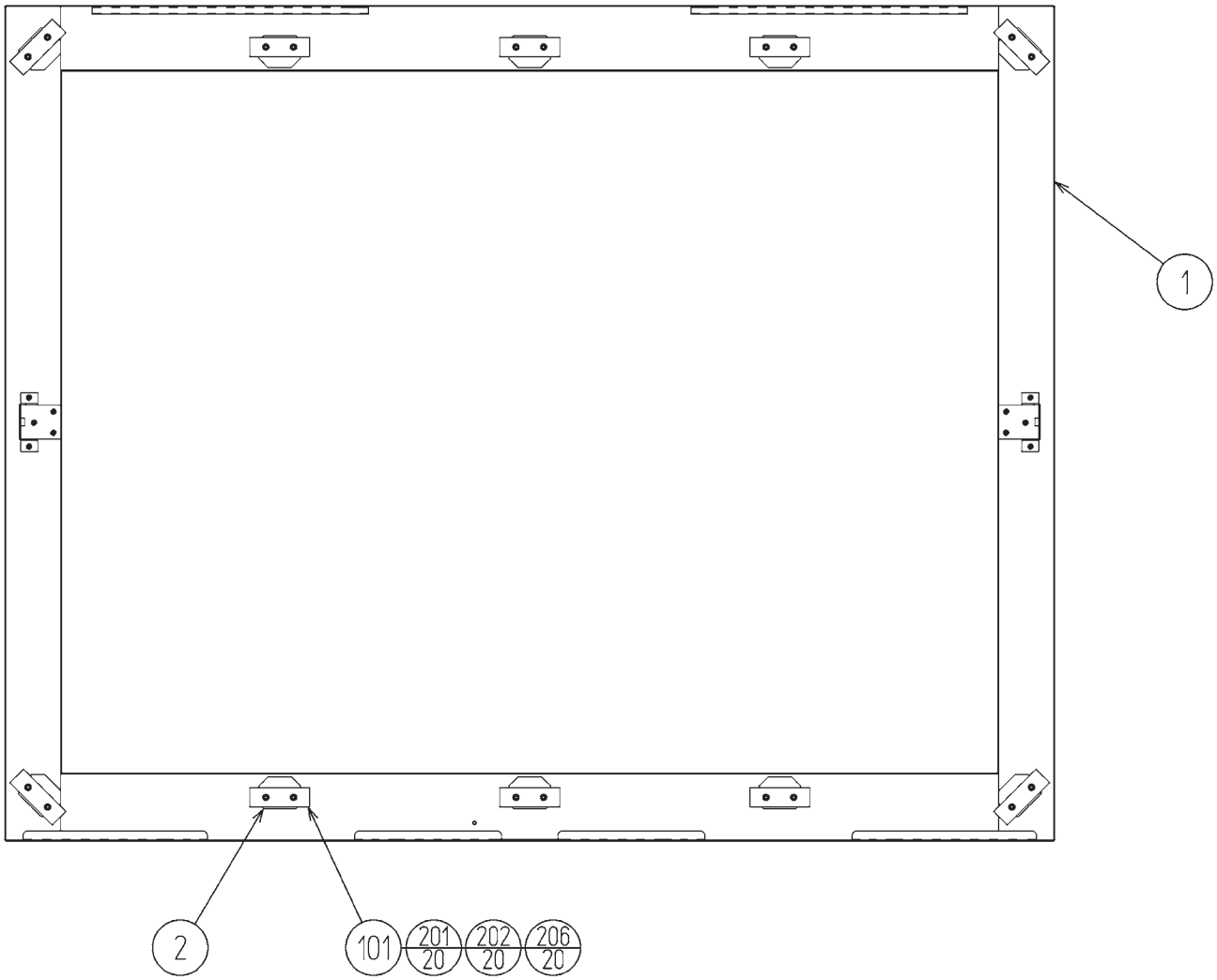
ASSY MASK (SPY-0530)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	SPY-0531	MASK BASE	
2	JPT-1082	IR COVER	
101	838-13145-02	LED BD GUN SENSOR HOD	
103	280-5008	CORD CLAMP 15	
201	050-U00300	U NUT M3	
202	068-330808-PN	FLT WSHR PLASTIC 3.3-8X0.8	
203	050-H00400	HEX NUT M4	
204	060-F00400	FLT WSHR M4	
205	060-S00400	SPR WSHR M4	
206	069-000026	FLT WSHR 3.2-11X0.5	
301	SPY-60026	WH MASK INTO	
302	SPY-60024	WH MASK SHORT	
303	SPY-60025	WH MASK LONG	
304	HOD-60035	WIRE HARN E MASK01	

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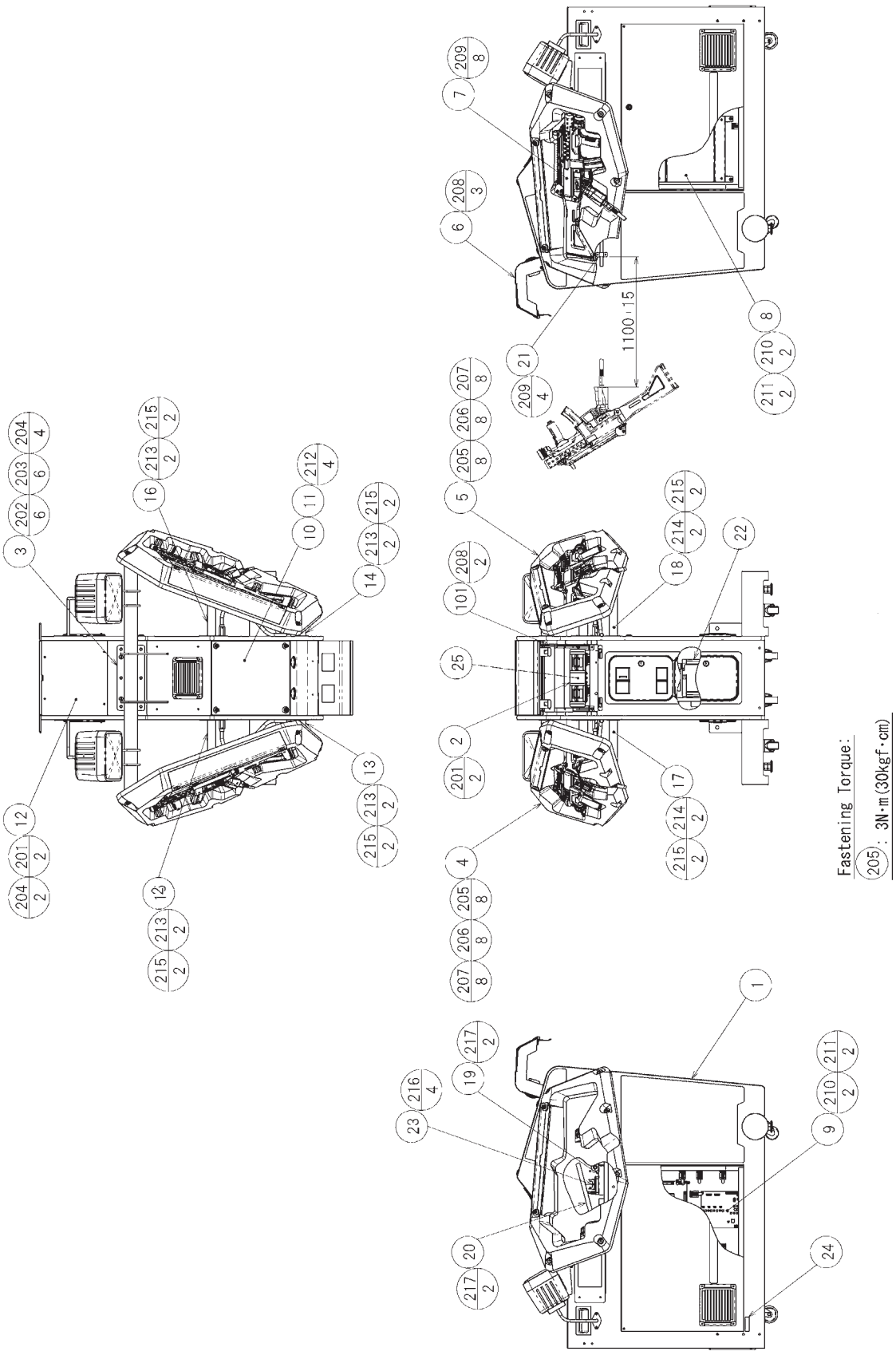

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ASSY CABINET DX (CTF-1000) (D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-1100	ASSY SUB CABI DX	
2	CTF-1150	IC RW UNIT	
3	CTF-1200	ASSY SPEAKER PIPE	
4	CTF-1300	ASSY CONTROLLER HOLDER L	
5	CTF-1320	ASSY CONTROLLER HOLDER R	
6	CTF-2000	ASSY CONTROLLER PANEL	
7	CTF-2100	CONTROL UNIT	
8	CTF-4000	ASSY MAIN BD	
9	CTF-4100	ASSY ELEC	
10	CTF-1001-01	INSTR PLATE ENG	
11	CTF-1002	WASHER CTF	
12	CTF-1003	LAMP LID	
13	CTF-1004	JOINT PIPE FRONT L	
14	CTF-1005	JOINT PIPE FRONT R	
15	CTF-1006	JOINT PIPE UPPER L	
16	CTF-1007	JOINT PIPE UPPER R	
17	CTF-1008	JOINT PIPE LOWER L	
18	CTF-1009	JOINT PIPE LOWER R	
19	CTF-1010	FUSE BD BRKT	
20	CTF-1011	FUSE BD COVER	
21	CPT-1017	CABLE CLAMP	
22	253-5366	CASH BOX	
23	839-1243	FUSE BD CTF	
25	421-11871-01	STICKER IC CARD RECOVERY ENG	
101	601-1140	STAY (SUGATSUNE L-140S)	
102	280-5169	CORD CLAMP TL-20S	
201	000-T00408-0B	M SCR TH BLK M4X8	
202	030-000820-SB	HEX BLT W/S BLK M8X20	
203	060-F00800-0B	FLT WSHR BLK M8	
204	000-T00420-0B	M SCR TH BLK M4X20	
205	FAS-500015	CAP NUT BLK M6	
206	060-S00600-0B	SPR WSHR BLK M6	
207	060-F00600-0B	FLT WSHR BLK M6	
208	050-F00400	FLG NUT M4	
209	000-T00420-0C	M SCR TH CRM M4X20	
210	032-000430	WING BLT M4X30	
211	068-441616	FLT WSHR 4.4-16X1.6	
212	FAS-290038	HEX SKT LH CAP SCR STN M5X10	
213	030-000630-SB	HEX BLT BLK W/S M6X30	
214	030-000645-SB	HEX BLT W/S BLK M6X45	
215	060-F00600-0B	FLT WSHR BLK M6	
216	000-P00320-W	M SCR PH W/FS M3X20	
217	000-P00420-W	M SCR PH W/FS M4X20	
218	000-P00408	M SCR PH M4X8	
219	050-H00400	HEX NUT M4	
220	060-S00400	SPR WSHR M4	
221	060-F00400	FLT WSHR M4	
301	CTF-60039-0120	WH 40K ID5 0120MM	

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ASSY SUB CABI DX (CTF-1100) (D-2/4)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-1160	SW UNIT	
2	CTF-1170	ASSY LATCH	
3	STR-1070	FAN UNIT	
4	610-0549-03	METER UNIT SUNGLE YL	
5	CTF-1101	CABINET DX	
6	CTF-1102	SIDE DOOR L	
7	CTF-1103	SIDE DOOR R	
8	CTF-1106	FOOT BASE	
9	CTF-1107	PIPE SUPPORT A	
10	CTF-1108	PIPE SUPPORT B	
11	CTF-1109	PIPE NUT BRKT	
12	CTF-1110	PIPE NUT PLATE A	
13	CTF-1111	PIPE NUT PLATE B	
14	CTF-1112	CONER BRKT	
15	CTF-1113	JOINT BRKT LOWER	
16	CTF-1114	CABI TOP LID	
17	CTF-1115	GLASS HOLDER	
18	CTF-1116	LAMP GLASS	
19	CTF-1117	HALOGEN LAMP BRKT	
20	CTF-1118	RW UNIT HOLDER	
21	CTF-1119	CONTROL PANEL HOLDER	
22	CTF-1120	PARTITION PLATE	
23	CTF-1121	STAY PLATE	
25	CTF-1123	RW NUT PLATE	
26	601-10562-0170	RUBBER PACKING NO.96 L=170MM	
27	601-10562-0095	RUBBER PACKING NO.96 L=95MM	
28	117-0062	PLATE LOCK RETAINER	
29	117-5098	TNG RETAINER PLATE	
30	105-5171	CHUTE PLATE SINGLE	
31	105-5169	LOCK BRACKET W	
32	DP-1148X	LKG TNG	
33	DP-1167	TNG LKG	
34	253-5460-01	AIR VENT BLACK	
35	117-5402-12-91	EARTH TERMINAL PLATE 12P	
36	601-5699X	LEG ADJUSTER BOLT M16X75	
37	253-5396-91	CABINET HANDLE	
38	CTF-1124	STICKER CABINET UPPER L	
39	CTF-1125	STICKER CABINET UPPER R	
40	CTF-1126	STICKER CABINET SIDE L	
41	CTF-1127	STICKER CABINET SIDE R	
42	CTF-1128	STICKER CABINET INSIDE L	
43	CTF-1129	STICKER CABINET INSIDE R	
44	CTF-1130	STICKER CABINET DOOR	
45	421-7501-34	STICKER 110V 40W	
46	421-7501-71	STICKER FL LAMP 13W	
47	421-7501-02	STICKER 6.3V 0.15A	

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ASSY SUB CABI DX (CTF-1100) (D-3/4)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
101	601-5471	CASTER	
102	601-6056-01	CASTER 50 PH	
104	220-5575	CAM LOCK MASTER W/O KEY	
105	220-5574	CAM LOCK W/ KEYS	
106	214-0123	BULB SOCKET E-26 (ES-T250-E26)	
107	214-0199-04	SOCKET E11 W/CONN VL WH	
108	310-5029-F20	SUMITUBE F F 20MM	
109	280-5009-01	CORD CLAMP 21	
110	280-5275-SR10	CORD CLAMP SR10	
111	280-0419	HARNESS LUG	
201	000-P00420-W	M SCR PH W/FS M4X20	
202	000-P00412-W	M SCR PH W/FS M4X12	
203	068-441616-0B	FLT WSHR BLK 4.4-16X1.6	
204	000-T00408-0B	M SCR TH BLK M4X8	
205	000-P00408	M SCR PH M4X8	
206	050-H00400	HEX NUT M4	
207	060-S00400	SPR WSHR M4	
208	060-F00400	FLT WSHR M4	
209	000-T00440-0B	M SCR TH BLK M4X40	
210	011-T03512	TAP SCR TH 3.5X12	
211	030-000835-S	HEX BLT W/S M8X35	
212	060-F00800	FLT WSHR M8	
213	030-000825-S	HEX BLT W/S M8X25	
214	030-000635-S	HEX BLT W/S M6X35	
215	060-F00600	FLT WSHR M6	
216	030-000645-SB	HEX BLT W/S BLK M6X45	
217	068-652016-0B	FLT WSHR BLK 6.5-20X1.6	
218	030-000630-S	HEX BLT W/S M6X30	
219	000-T00420-0B	M SCR TH BLK M4X20	
220	000-T00416-0B	M SCR TH BLK M4X16	
221	000-F00412	M SCR FH M4X12	
222	000-P00408-W	M SCR PH W/FS M4X8	
223	000-F00416	M SCR FH M4X16	
224	030-000630-S	HEX BLT W/S M6X30	
225	030-000612-S	HEX BLT W/S M6X12	
227	000-P00430	M SCR PH M4X30	
228	000-P00308-S	M SCR PH W/S M3X8	
229	011-F03516	TAP SCR FH 3.5X16	
230	FAS-500009	KURATITE NUT M4	
231	011-F00312	TAP SCR #1 FH 3X12	

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ASSY SUB CABI DX (CTF-1100) (D-4/4)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
301	CTF-6001	ASSY WIRE SUBCABI AC	
302	CTF-6002	ASSY WIRE SUBCABI DC	
304	600-6972-0100	WIRE HARN EARTH ID5 0100MM	
305	600-6455-02	WIRE HARN C.C DOOR SINGLE	
307	CTF-60019	WH AC FAN	
308	CTF-60020	WH AC FL LAMP	
309	CTF-60034	WH COIN EXT	
310	CTF-60039-0120	WH 40K ID5 0120MM	
311	CTF-30039-0200	WH 40K ID5 0200MM	

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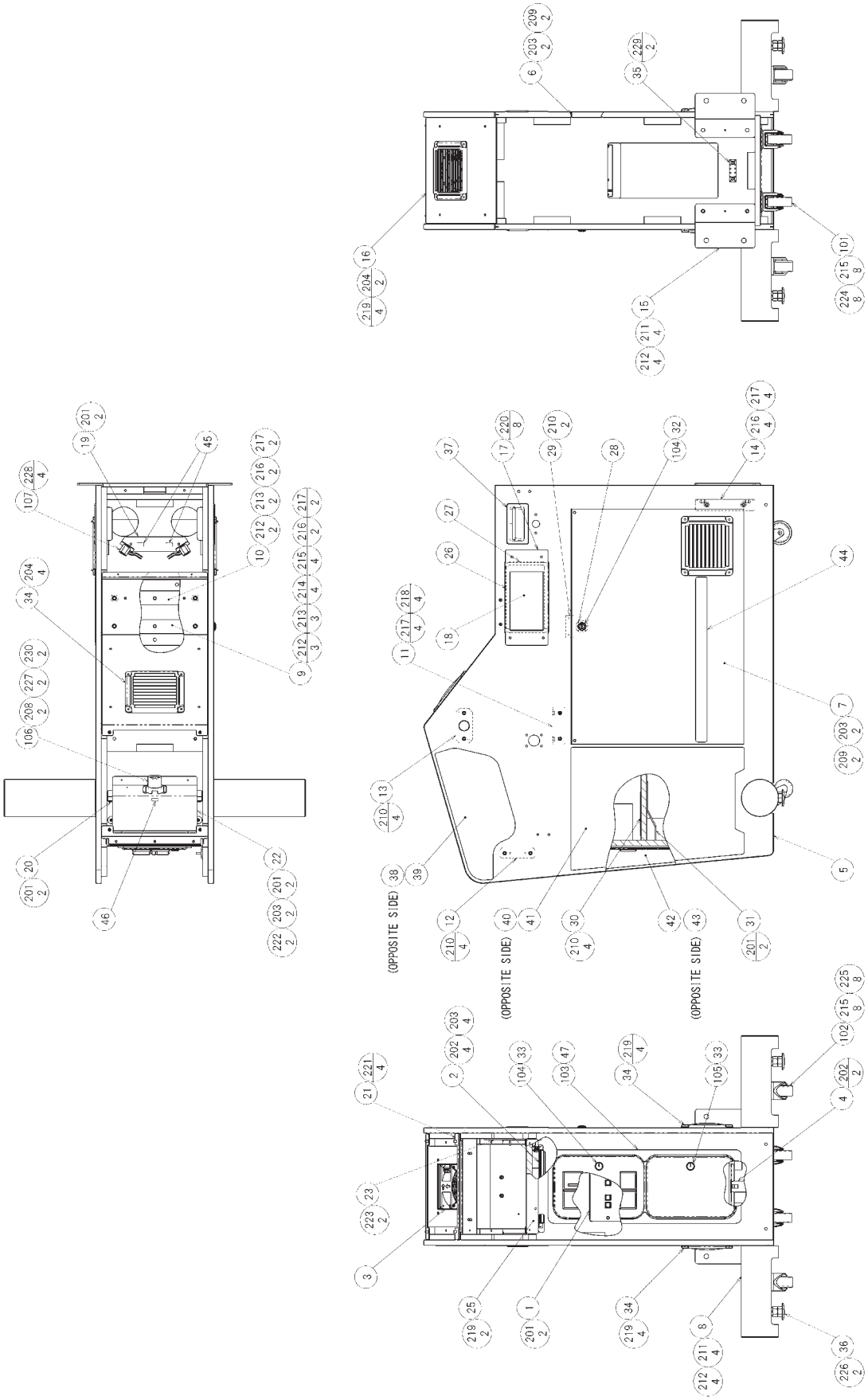
ASSY SUB CABI DX (CTF-1100) (D-1/4)



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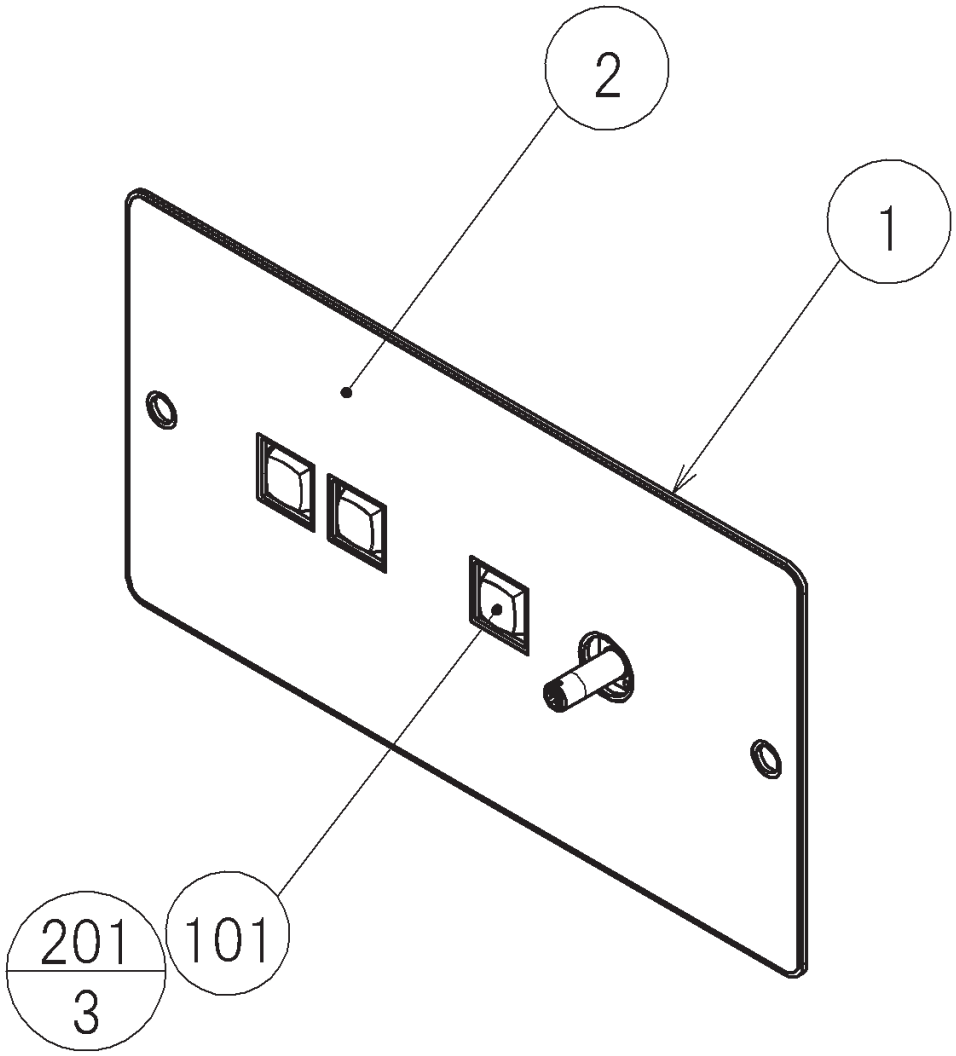
SW UNIT (CTF-1160)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-1161	SW PLATE	
2	421-11826	STICKER SW UNIT CTF	
101	838-13739-02	SW BD TFN	
201	000-P00308-W	M SCR PH W/FS M3X8	

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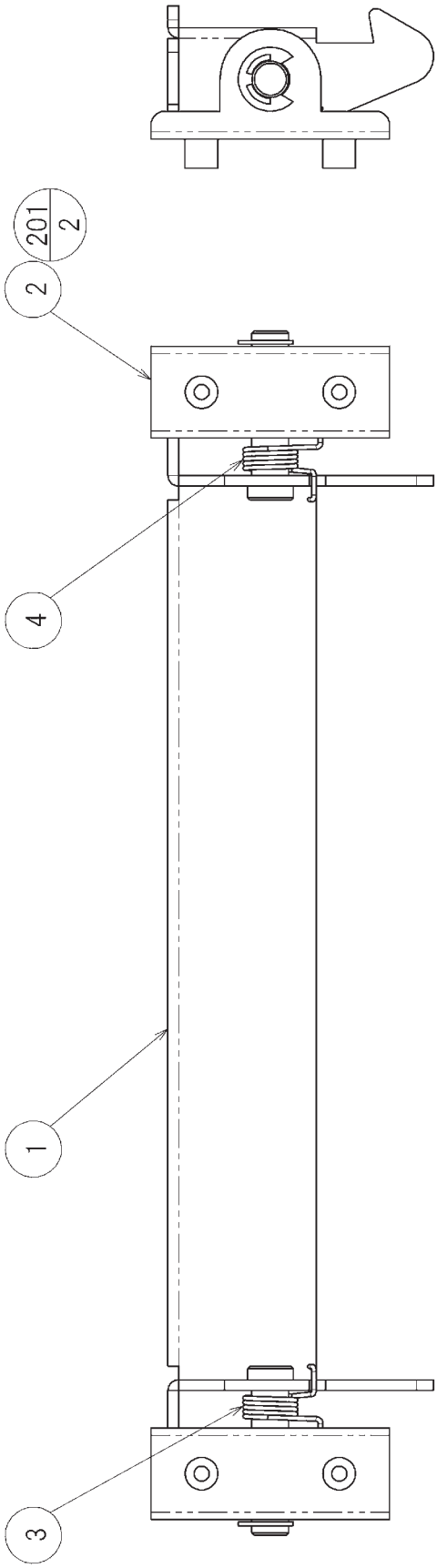
ASSY LATCH (CTF-1170) (D-1/2)



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ASSY LATCH (CTF-1170) (D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-1171X	LATCH	
2	CTF-1172	LATCH BRKT	
3	CTF-1173	LATCH SPRING L	
4	CTF-1174	LATCH SPRING R	
201	065-E00700	E RING 7MM	

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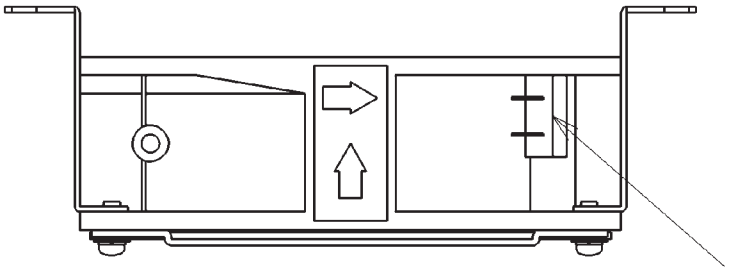
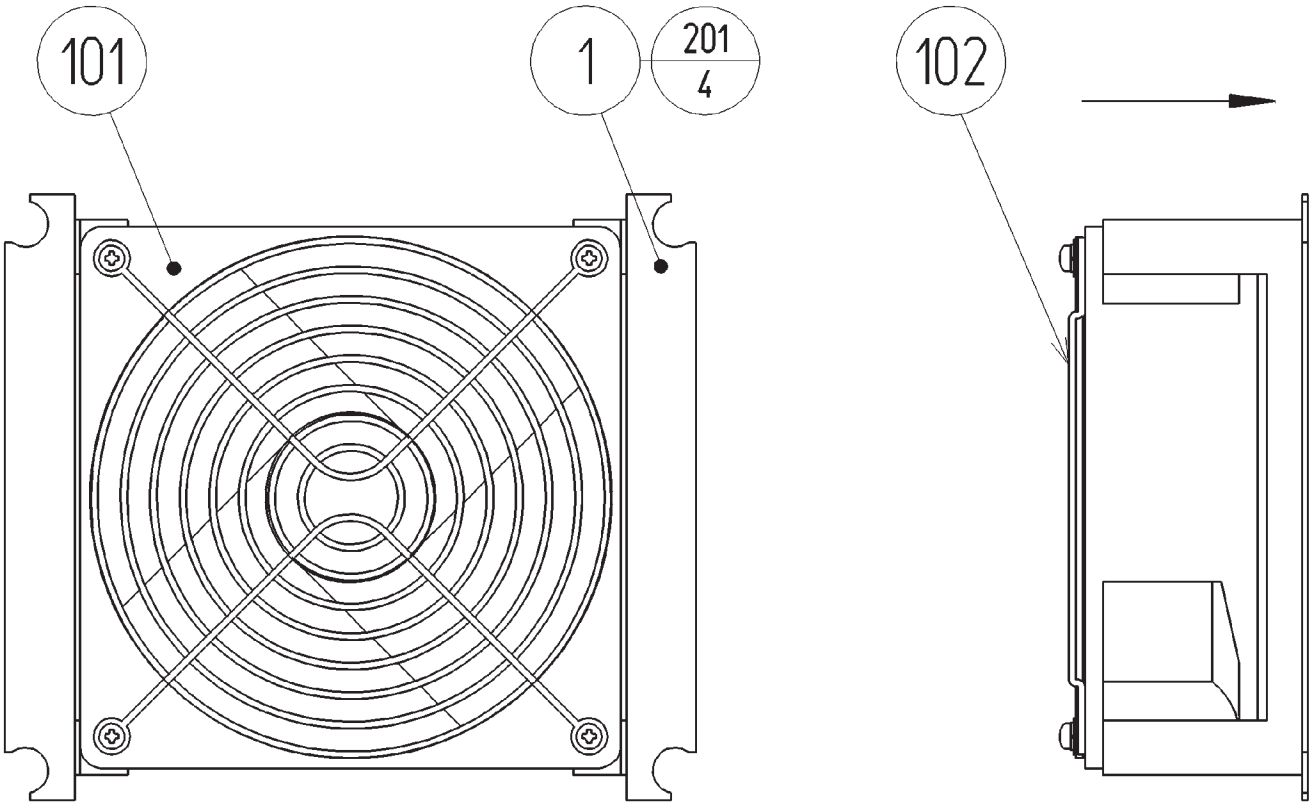
FAN UNIT (STR-1070)





ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	105-5340-01	FUN BRKT LONG	
101	260-0011-03	AXIAL FLOW FAN AC100V 50-60HZ	
102	601-8543	FAN GUARD	
201	000-P00312-W	M SCR PH W/FS M3X12	

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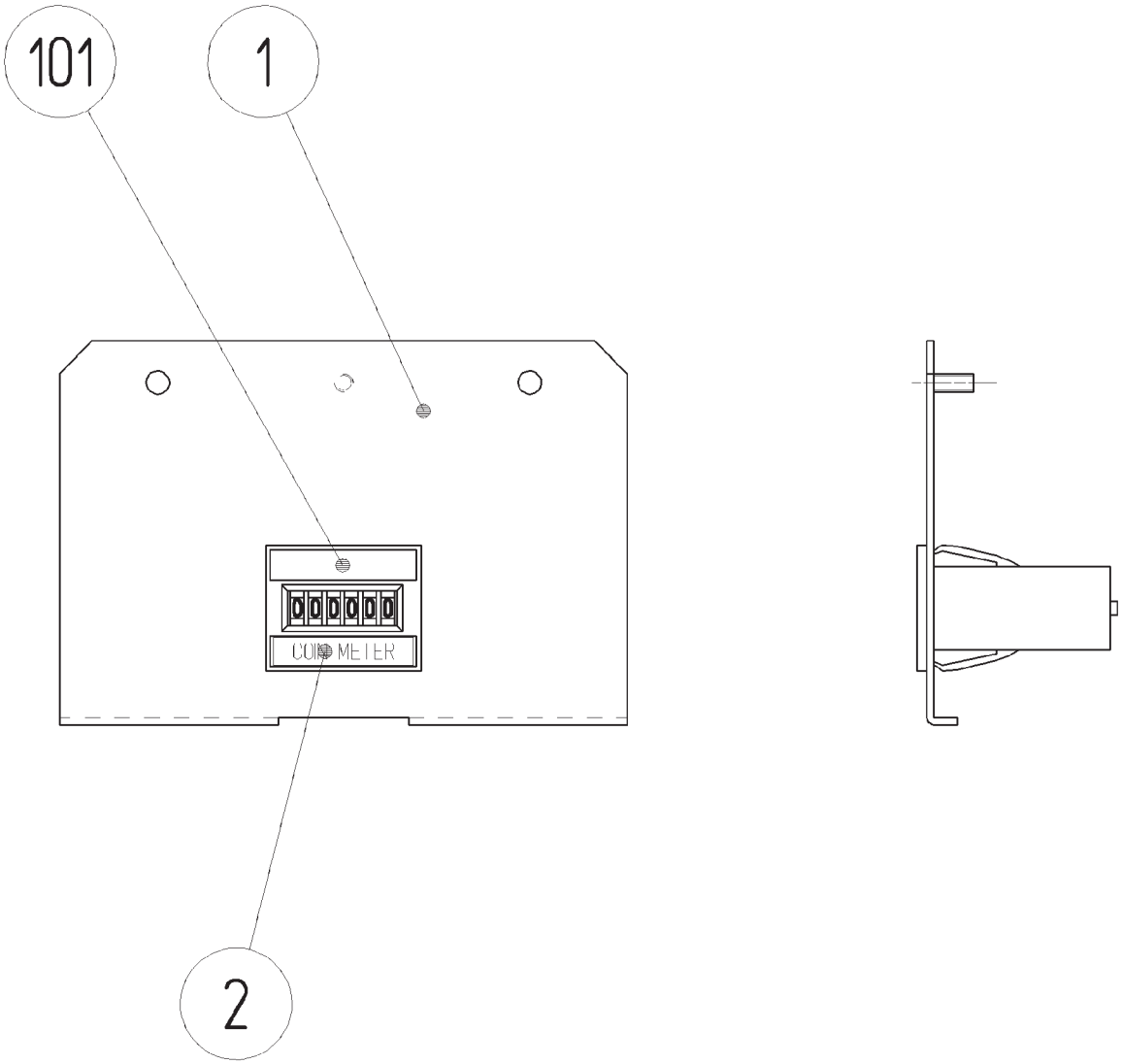
METER UNIT SINGLE YL (610-0549-03)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	OCN-1521	METER BRKT	
2	421-9168-01	STICKER COIN METER	
101	220-5778-01	MAG CNTR 4P MZ674-DC5V-D28	

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METER UNIT SINGLE YL (610-0549-03)

This is comprised of the following wire harnesses. ASSY drawing is not available.

ITEM NO.	PART NO.	DESCRIPTION	NOTE
101	601-0460	PLASTIC TIE BELT 100 M/M	
301	CTF-60018	WH AC EXT FRINT CABI	
302	CTF-60037	WH AC EXT2 FRONT CABI	
303	CTF-60038	WH EARTH MASK	
304	CTF-60039-1720	WH 40K ID5 1720MM	
306	600-6972-0920	WIRE HARN EARTH ID5 0920MM	
307	600-6972-1570	WIRE HARN EARTH ID5 1570MM	

ASSY WIRE SUBCABI DC (CTF-6002)

This is comprised of the following wire harnesses. ASSY drawing is not available.

ITEM NO.	PART NO.	DESCRIPTION	NOTE
101	601-0460	PLASTIC TIE BELT 100 M/M	
301	600-7009-1000	ASSY RGB CA D-SUB 15P 1000MM	
302	600-7141-100	CABLE JVS TYPE A-B 100CM	
304	CTF-60021	WH AUDIO EXT	
305	CTF-60022	WH POWER EXT	
306	CTF-60023	WH SENSOR LED EXT	
307	CTF-60024	WH CARD RW & HOLDER	
308	CTF-60030	WH START & SENSOR CONT	

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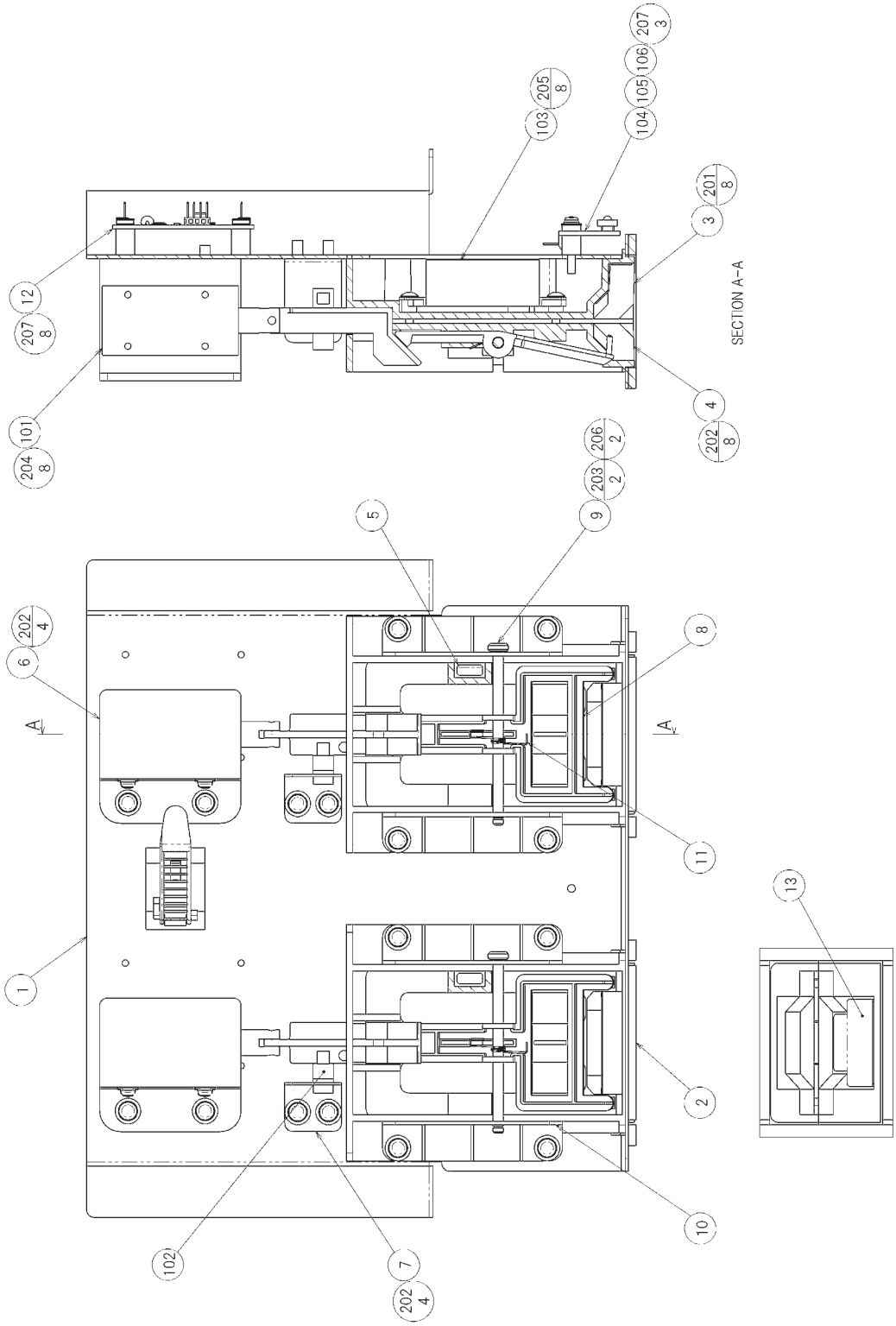

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IC RW UNIT (CTF-1150) (D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-1151	RW BASE	
2	CTF-1152	CUSHION SPONGE RW	
3	TBA-1662	RW GUIDE LOWER	
4	TBA-1663	RW GUIDE UPPER	
5	CFB-1664	ROLLER	
6	CFB-1665	SOL BASE	
7	CFB-1666	SENSOR BRKT	
8	TBA-1667	LOCK ARM	
9	TBA-1668	SHAFT	
10	TBA-1669	SHAFT GUIDE	
11	125-5225	TOR SPRING LOCK ARM	
12	839-1204-02	SERIAL I/F BD CTF	
13	CTF-1153-01	STICKER IC CARD ENG	
101	610-0680	SOLENOID UNIT	
102	370-5161	PHOTO INTERRUPTER GP1A71A	
103	601-11132	IC CARD READER HW210 (TAMURA)	
104	838-14463	LED BAR GD GREEN	
105	280-5247	ONE TOUCH BUSHING	
106	280-5248-7.5	ONE TOUCH COLLOR M3 L=7.5	
107	280-5009-01	CORD CLAMP 21	
108	280-5275-SR10	CORD CLAMP SR10	
201	FAS-120001	TAP SCR #2 TH BLK 4X10	
202	000-P00410-W	M SCR PH W/FS M4X10	
203	060-F00400	FLT WSHR M4	
204	000-P00308-W	M SCR PH W/FS M3X8	
205	FAS-120017	TAP SCR #2 TH 3X6	
206	065-E00300	E RING 3MM	
207	000-P00320-W	M SCR PH W/FS M3X20	
301	CTF-60028	WH CARD RW 1	<OTHERS>
302	CTF-60029	WH CARD RW 2	

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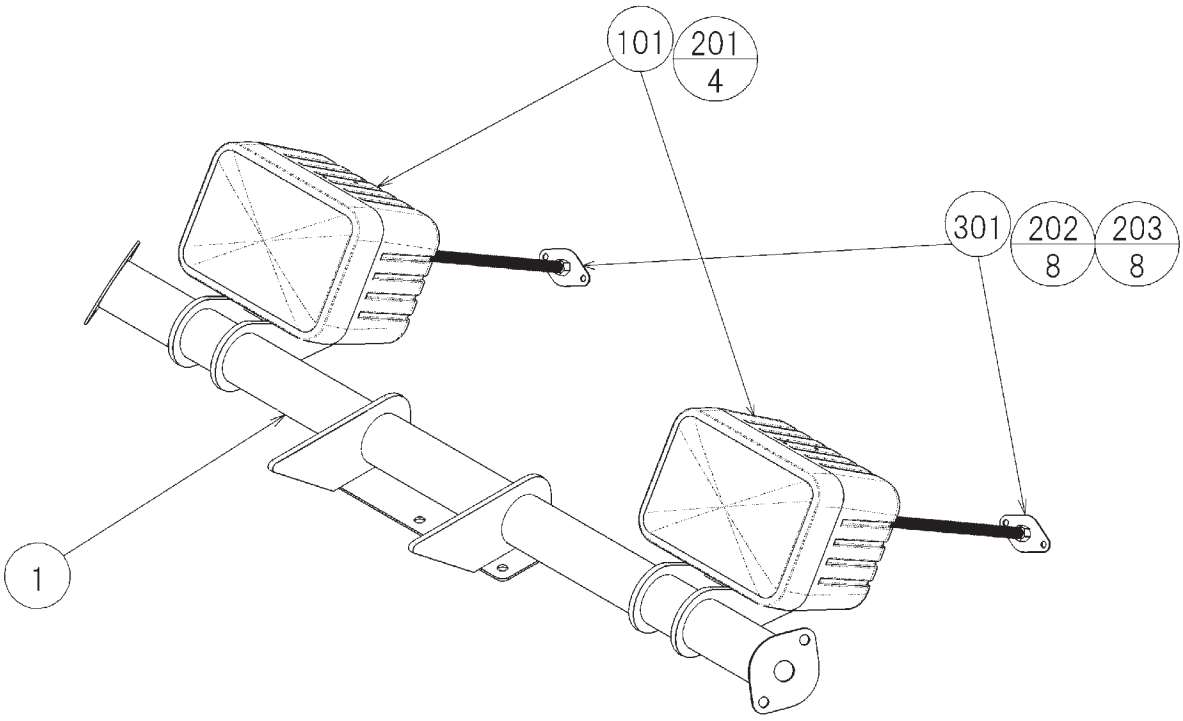
ASSY SPEAKER PIPE (CTF-1200)



Attach (101) so that the speakers are on the outside and the bass reflex ducts are on the inside.

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-1201	JOINT PIPE REAR	
101	130-5228-01	SPEAKER BOX 40OHM 40W	
102	280-5275-SR10	CORD CLAMP SR10	
201	000-P00512-WB	M SCR PH W/FS BLK M5X12	
202	012-P00512-0B	TAP SCR #2 PH BLK 5X12	
203	060-F00500-0B	FLT WSHR BLK M5	
301	CTF-60025	WH SPEAKER EXT	

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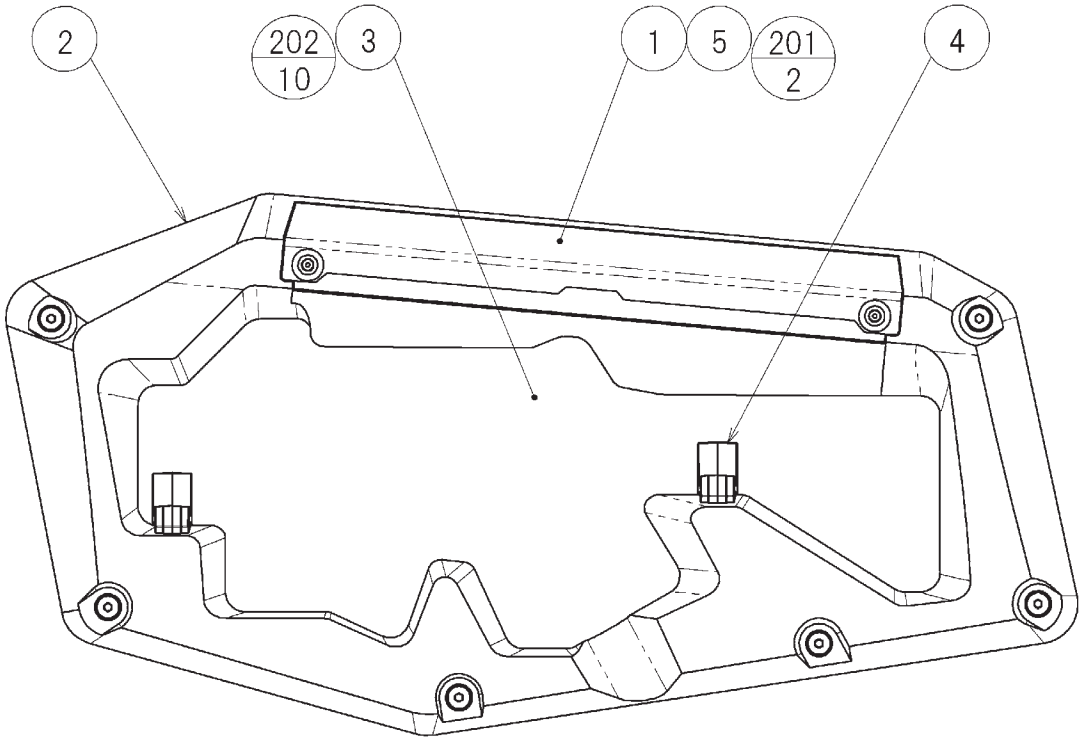
ASSY CONTROLLER HOLDER (CTF-1300)



Fastening Torque:

(201) : 1.4N•m(14kgf•cm)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-1340	ASSY HOLDER LIGHT	
2	CTF-1301	CONTROLLER HOLDER L	
3	CTF-1302	CONTROLLER HOLDER PLATE L	
4	CTF-1303	CONTROLLER HOOK	
5	CTF-1002	WASHER CTF	
201	FAS-290037	HEX SKT LH CAP SCR SCR STN M5X20	
202	FAS-120031	TAP SCR P-TITE TH BLK 4X16	

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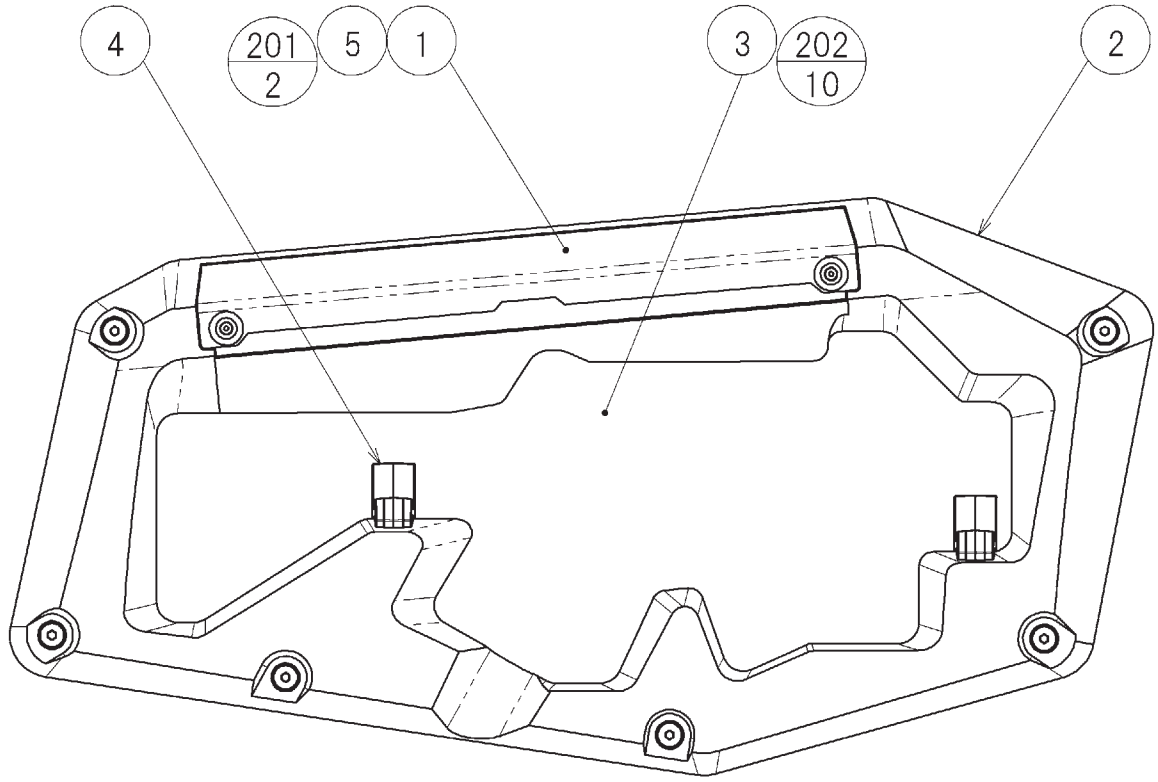
ASSY CONTROLLER HOLDER (CTF-1320)



Fastening Torque:

201 : 1.4N•m(14kgf•cm)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-1340	ASSY HOLDER LIGHT	
2	CTF-1321	CONTROLLER HOLDER R	
3	CTF-1322	CONTROLLER HOLDER PLATE R	
4	CTF-1303	CONTROLLER HOOK	
5	CTF-1002	WASHER CTF	
201	FAS-290037	HEX SKT LH CAP SCR SCR STN M5X20	
202	FAS-120031	TAP SCR P-TITE TH BLK 4X16	

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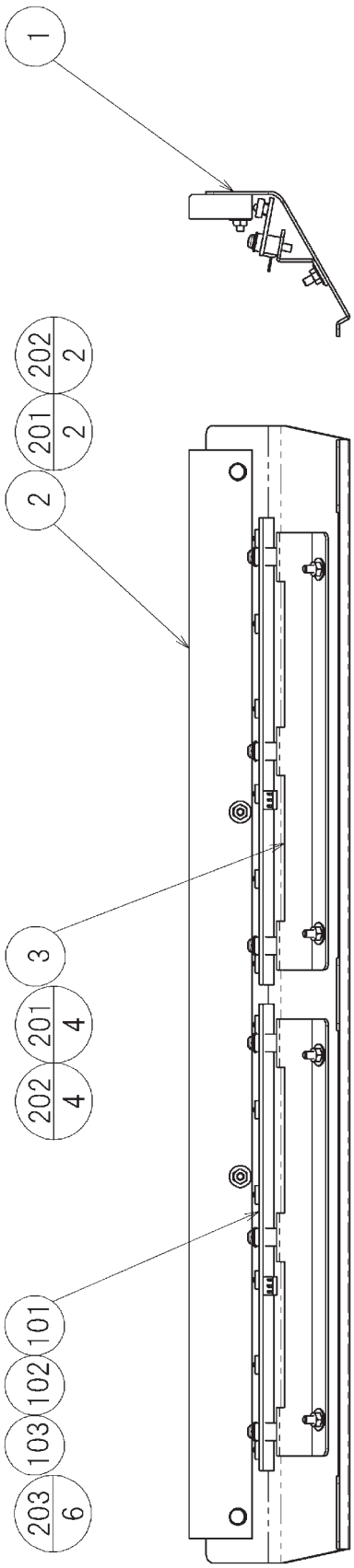
ASSY HOLDER LIGHT (CTF-1340) (D-1/2)



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ASSY HOLDER LIGHT (CTF-1340) (D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-1341	HOLDER LIGHT COVER	
2	CTF-1342	HOLDER LIGHT PLATE	
3	CTF-1343	LED BD BRKT	
101	838-14463	LED BAR BD GREEN	
102	280-5247	ONE TOUCH BUSHING	
103	280-5248-5.7	ONE TOUCH COLLAR M3 L=5.7	
104	280-5275-SR10	CORD CLAMP SR10	
201	050-U00300	U NUT M3	
202	060-F00300	FLT WSHR M3	
203	000-P00316-W	M SCR PH W/FS M3X16	
301	CTF-60027	WH HOLDER LED	

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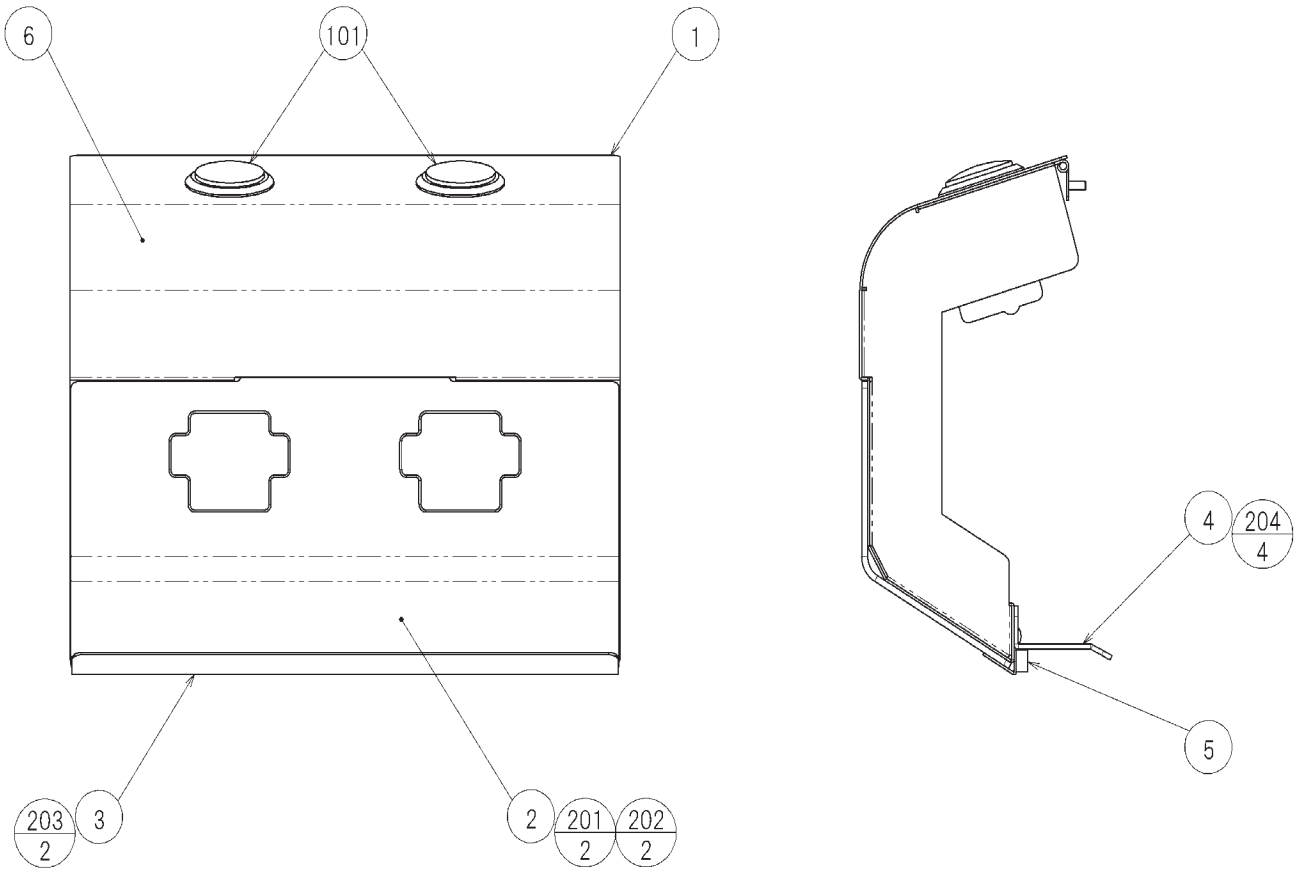
ASSY CONTROL PANEL (CTF-2000)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-2001	CONTROL PANEL BASE	
2	CTF-2002X	CARD ENTRY PLATE	
3	CTF-2003	ENTRY PLATE SASH	
4	CTF-2004X	LOCK BRKT	
5	CTF-2005	CUSHION SPONGE CONT PNL	
6	CTF-2006-01	STICKER CONTROL PANEL ENG	
101	509-6069	SW PB OBSA-45UM-G-1FLED-G-5V	
102	280-5009-01	CORD CLAMP 21	
201	050-F00400	FLG NUT M4	
202	068-441616	FLT WSHR 4.4-16X1.6	
203	000-T00408-0B	M SCR TH BLK M4X8	
204	000-F00408	M SCR FH M4X8	
301	CTF-60031	WH START SW	

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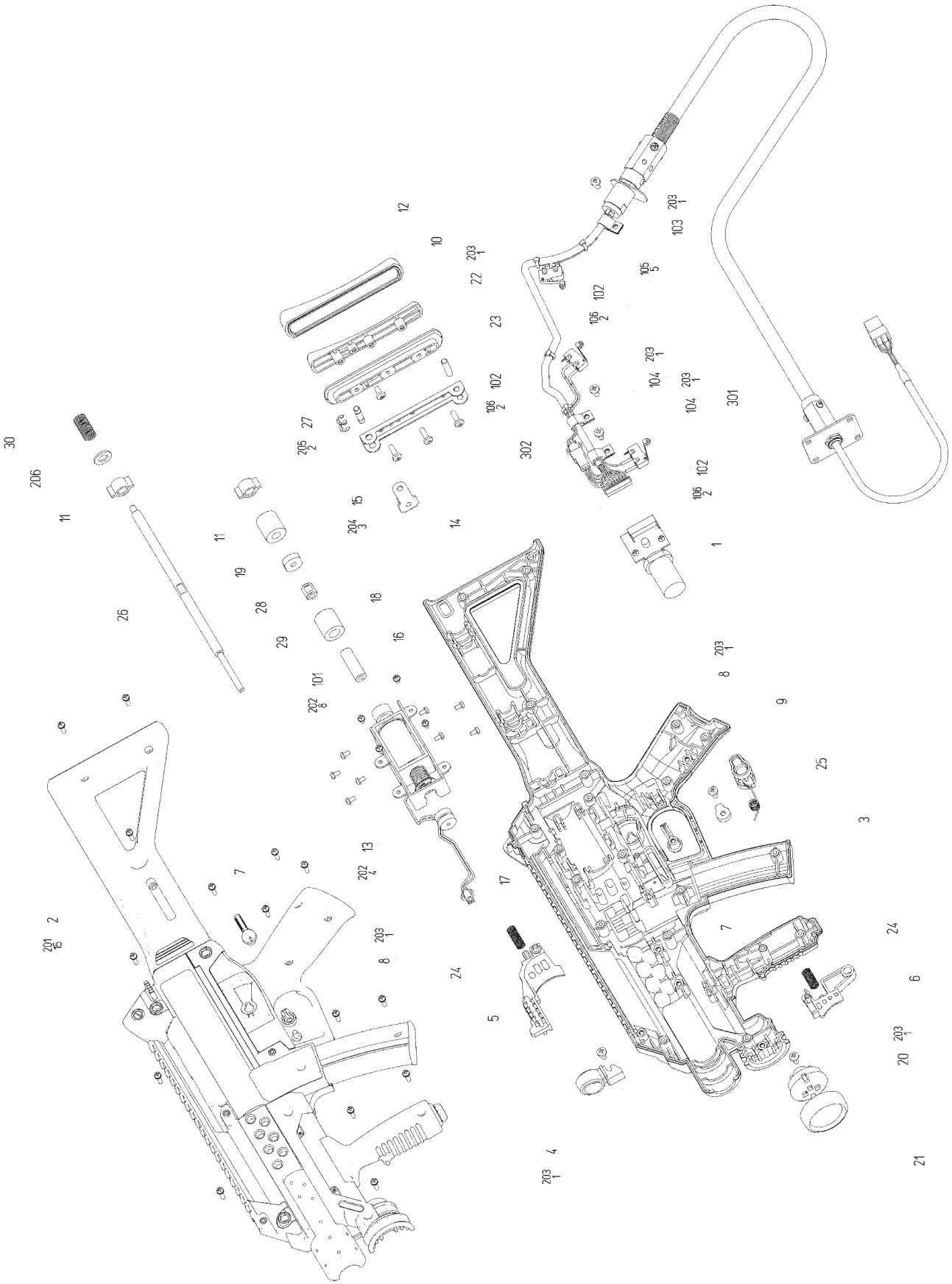

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CONTROL UNIT (CTF-2100) (D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-2030	SENSOR UNIT	
2	CTF-2101	COVER L	
3	CTF-2102	COVER R	
4	CTF-2103	FRONT SIGHT	
5	CTF-2104	MAIN TRIGGER	
6	CTF-2105	SUB TRIGGER	
7	CTF-2106	SELECTOR	
8	CTF-2107	SELECTOR HOLDER	
9	CTF-2108	SELECTOR JOINT	
10	CTF-2109	PAD BASE	
11	CTF-2110	BEARING HOLDER	
12	CTF-2111	PAD	
13	CTF-2112	SOLENOID FRAME	
14	CTF-2113	SHAFT JOINT	
15	CTF-2114	PAD FRAME	
16	CTF-2115	RECOIL DAMPER	
17	CTF-2116	SOLENOID DAMPER	
18	CTF-2117	SHAFT DAMPER F	
19	CTF-2118	SHAFT DAMPER R	
20	CTF-2119	CAP BASE	
21	CTF-2120	LIGHT CAP	
22	CTF-2121	PAD BEZEL	
23	CTF-2122	PAD PIN	
24	CTF-2123	TRIGGER SPRING	
25	CTF-2124	SELECTOR SPRING	
26	CTF-2125	SHAFT	
27	CTF-2126	JOINT PIN	
28	CTF-2127	SHAFT STOPPER	
29	CTF-2128	DAMPER BASE	
30	CTF-2129	RETURN SPRING	
101	124-5097	SOLENOID	
102	509-5080	SW MICRO TYPE (SS-5GL2)	
103	280-5124-04	NYLON CLAMP NK04	
104	280-5124-05	NYLON CLAMP NK05	
105	601-0460	PLASTIC TIE BELT 100 M/M	
106	310-5029-D20	SUMITUBE F D 20MM	
201	FAS-000100	M SCR PH W/SMALL FS BLK M3X12	
202	000-P00306-S	M SCR PH W/S M3X6	
203	FAS-120029	TAP SCR P-TITE PH 4X8	
204	FAS-120030	TAP SCR P-TITE PH BLK 4X12	
205	065-E00400	E RING 4MM	
206	FAS-600020	FLT WSHR NORM A M8	
301	CTF-60032	WH CONTROLLER MAIN EXT	
302	CTF-60033	WH CONTROLLER SW EXT	

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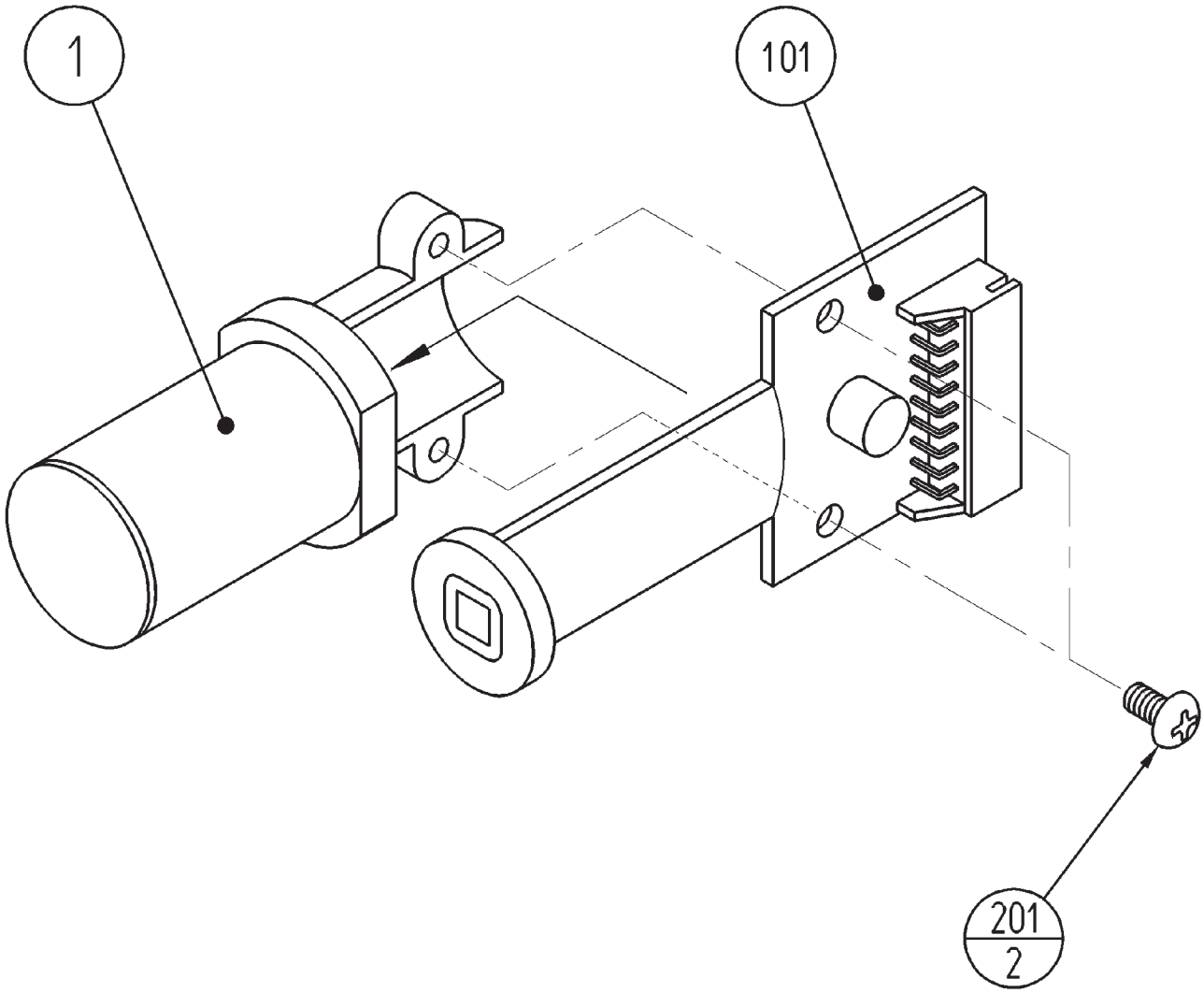
SENSOR UNIT (JPT-2030)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	JPT-2031	SENSOR HOLDER	
101	838-13144	SENSOR BD GUN SENSE	
201	012-P00306	TAP SCR #2 PH 3X6	

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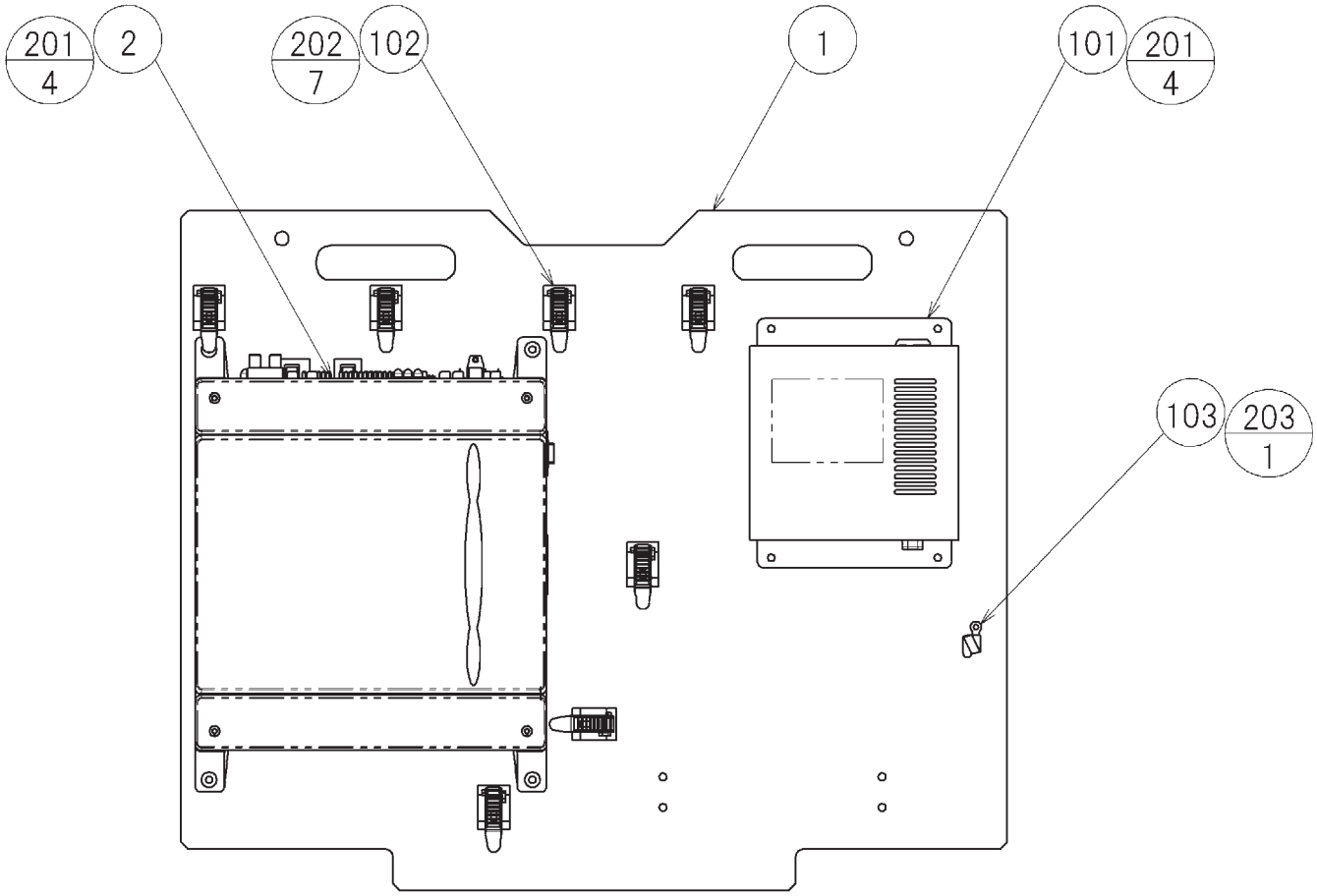
ASSY MAIN BD (CTF-4200)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-4001	WOODEN BSE MAIN	
2	843-0001D-22	ASSY CASE BOX COM DIMM EXP	
101	400-5443-01	SW REGU FOR CHIHIRO VW	
102	280-5009-01	CORD CLAMP 21	
103	280-0419	HARNESS LUG	
104	270-5117	FERRITE CORE TDK ZCAT3035-1330	
201	000-P00406-W	M SCR PH W/FS M4X16	
202	011-F00312	TAP SCR #1 FH 3X12	
203	011-T03512	TAP SCR TH 3.5X12	
301	600-7247-500	CABLE SCSI ST-L TYPE2 500MM	
303	CTF-60014	WH AC MAIN	
304	CTF-60015	WH POWER & 232C MAIN	
305	CTF-60016	WH AUDIO MAIN	
306	CTF-60017	WH GD PWR MAIN	
308	600-7159-041	WIRE HARN JVS PWR 041CM	

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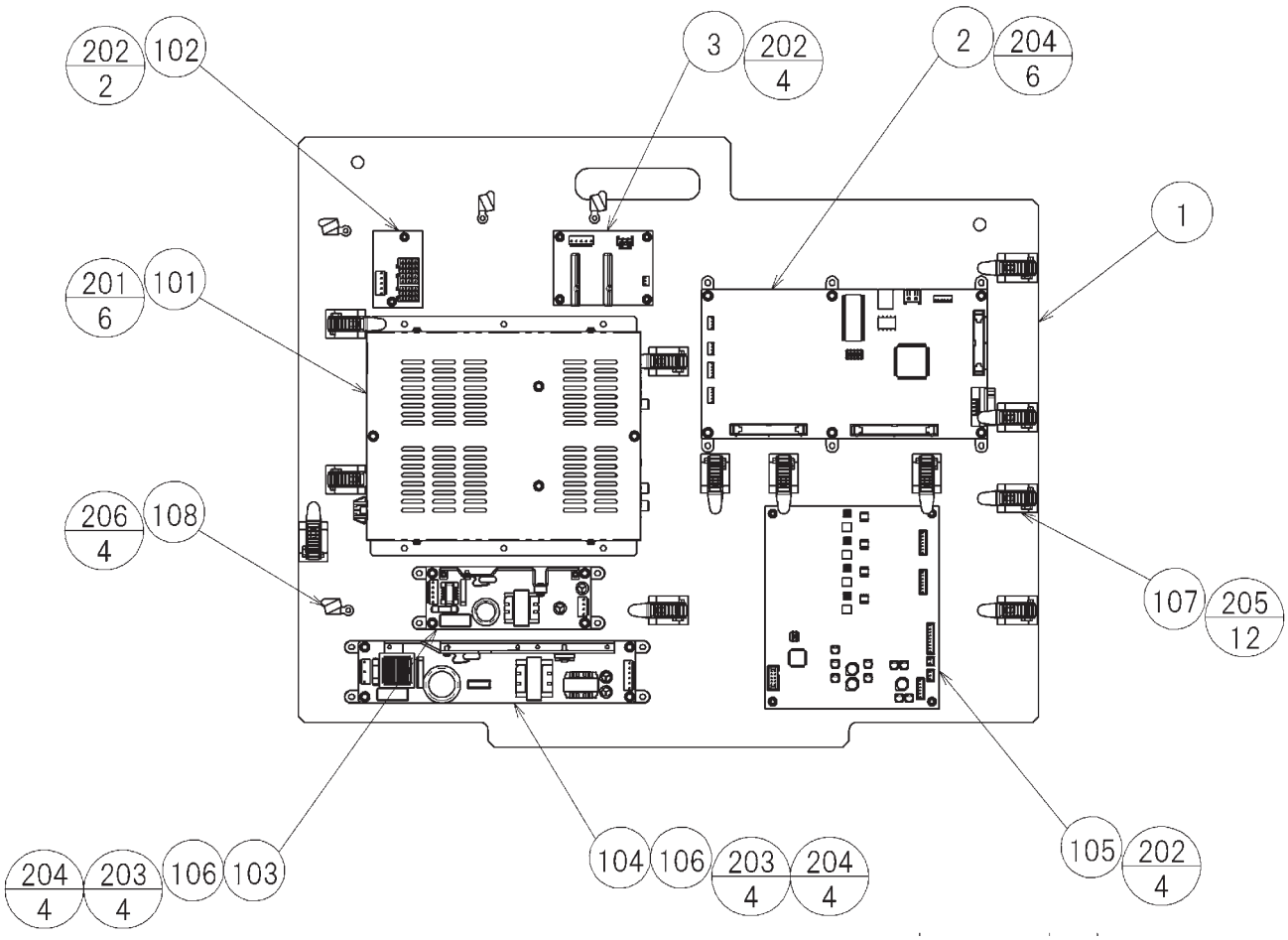

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ASSY ELEC (CTF-4100) (D-2/2)

ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-4101	WOODEN BASE ELEC	
2	837-13844-02	I/O CONTROL BD 2 W/O 232C DOG	
3	839-1073-01UL	SSR BD 2 AC 2A	
101	601-10369	STEREO PWR AMP 47	
102	838-11856-UL	CONNECT BD UL	
103	400-5421-03012	SW REGU LCA30S-12	
104	400-4521-07524	SW REGU LCA75S-24	
105	838-14465	IC BD GUN SENCE NEW EDIT DX	
106	601-7467	L-LOCK BK	
107	280-5009-01	CORD CLAMP 21	
108	280-0419	HARNESS LUG	
201	000-P00416-W	M SCR PH W/FS M4X16	
202	011-P00325	TAP SCR PH 3X25	
203	000-P00308-W	M SCR PH W/FS M3X8	
204	011-P03516	TAP SCR PH 3.5X16	
205	011-F00312	TAP SCR #1 FH 3X12	
206	011-T03512	TAP SCR TH 3.5X12	
301	CTF-60006	WH AC 1 ELEC	
302	CTF-60007	WH AC 2 ELEC	
303	CTF-60008	WH MAIN ELEC	
304	CTF-60009	WH 12V ELEC	
305	CTF-60010	WH AUDIO ELEC	
306	CTF-60011	WH SENSOR LED ELEC	
307	CTF-60012	WH SENSOR CONT ELEC	
308	CTF-60013	WH SENSOR FREQ ELEC	

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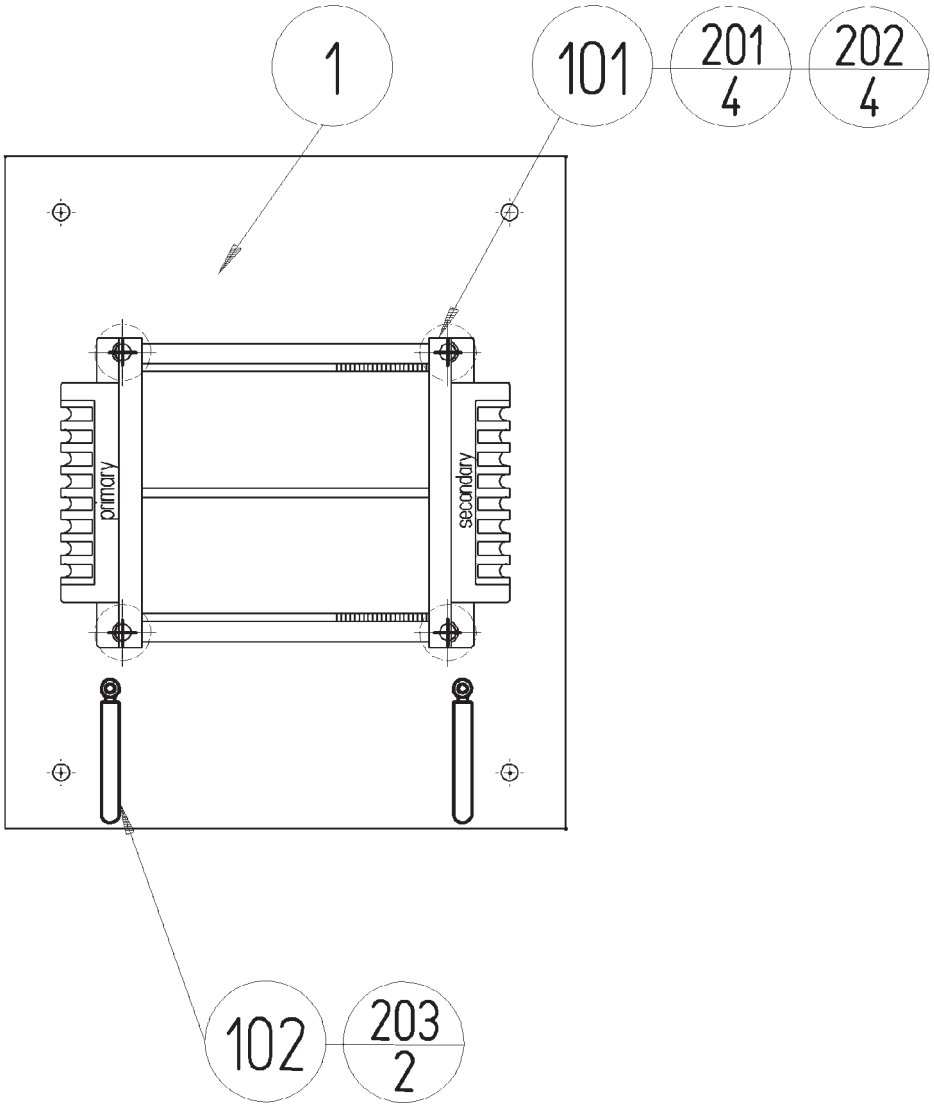
ASSY XFMR 100V AREA (CTF-4200)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-0663	TRANS BASE	
101	560-5384	XFMR 100-120V 100V 10A WB	
102	280-5207	HARNESS LUG CC-1005	
201	030-000620-S	HEX BLT W/S M6X20	
202	068-652016	FLT WSHR 6.5-20X1.6	
203	011-T03512	TAP SCR TH 3.5X12	
301	CTF-60036	WH AC EXT PTV CABI EXP	

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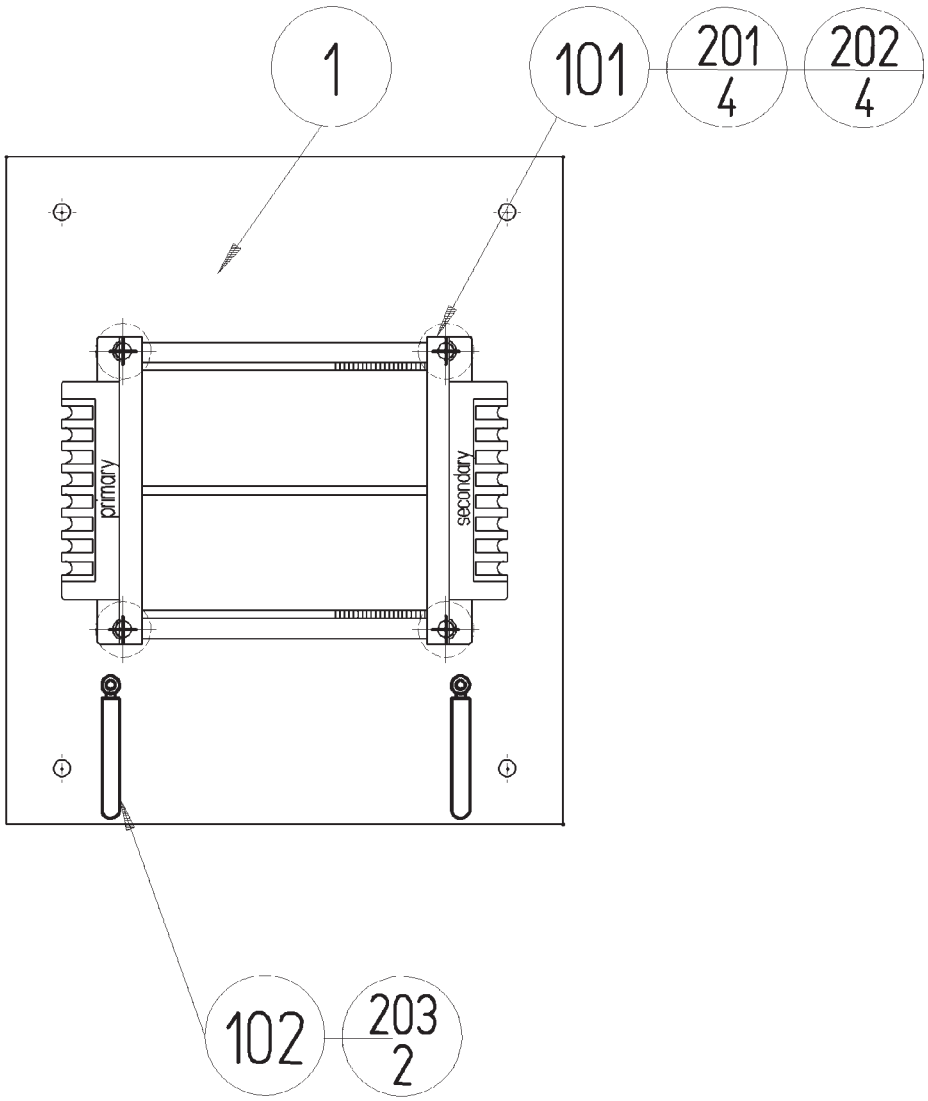
ASSY XFMR 200V AREA (CTF-4300)



ITEM NO.	PART NO.	DESCRIPTION	NOTE
1	CTF-0663	TRANS BASE	
101	560-5377	PWR XFMR 200-240V 100V 10A CE	
102	280-5207	HARNESS LUG CC-1005	
201	030-000620-S	HEX BLT W/S M6X20	
202	068-652016	FLT WSHR 6.5-20X1.6	
203	011-T03512	TAP SCR TH 3.5X12	
301	CTF-60036	WH AC EXT PTV CABI EXP	

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20. WIRE COLOR CODE TABLE

THE WIRE COLOR CODE is as follow:

A	PINK
B	SKY BLUE
C	BROWN
D	PURPLE
E	LIGHT GREEN

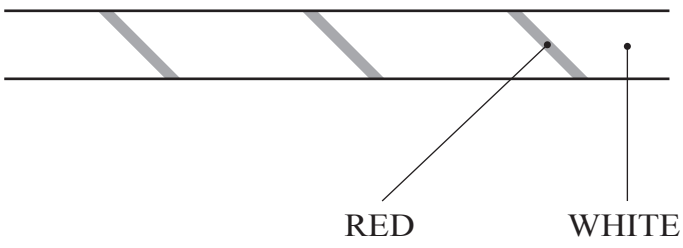
Wires other than those of any of the above 5 single colors will be displayed by 2 alphanumeric characters.

1	RED
2	BLUE
3	YELLOW
4	GREEN
5	WHITE
7	ORANGE
8	BLACK
9	GRAY

If the right-hand side numeral of the code is 0, then the wire will be of a single color shown by the left-hand side numeral (see the above).

Note 1: If the right-hand side alphanumeric is not 0, that particular wire has a spiral color code. The left-hand side character shows the base color and the right-hand side one, the spiral color.

<Example> 51 ..... WHITE / RED



Note 2: The character following the wire color code indicates the size of the wire.

U:	AWG16
K:	AWG18
L:	AWG20
None:	AWG22

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Warranty

Your new Sega Product is covered for a period of 90 days from the date of shipment. This certifies that the Printed Circuit Boards, Power Supplies and Monitor are to be free of defects in workmanship or materials under normal operating conditions. This also certifies that all Interactive Control Assemblies are to be free from defects in workmanship and materials under normal operating conditions. No other product in this machine is hereby covered.

Sellers sole liability in the event a warranted part described above fails shall be, at its option, to replace or repair the defective part during the warranty period. For Warranty claims, contact your Sega Distributor.

Should the Seller determine, by inspection that the product was caused by Accident, Misuse, Neglect, Alteration, Improper Repair, Installation or Testing, the warranty offered will be null and void.

Under no circumstances is the Seller responsible for any loss of profits, loss of use, or other damages.

This shall be the exclusive written Warranty of the original purchaser expressed in lieu of all other warranties expressed or implied. Under no circumstance shall it extend beyond the period of time listed above.

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